THE

AMERICAN

MEDICAL AND PHILOSOPHICAL

REGISTER.

APRIL, 1814.

ORIGINAL COMMUNICATIONS.

I.

Improvement *in* Mills, *by* Jacob Perkins, Esq. *of Newburyport.*

(See the annexed Engraving.)

The object of this improvement is the removal of the inconveniences heretofore experienced from back water.

It is a well known fact that in most situations it has been found necessary to place water wheels from one foot to three feet higher than they otherwise should be, were it not requisite to avoid the back water occasioned by freshets and high tides: in almost all cases there is a serious loss of power, but especially when the fall consists of a few feet only. Mr. Perkins has satisfactorily proved, that with a head and fall of twelve feet, six feet of back water may be driven away, and with it, all the water which has been expended in moving the wheel: there is, therefore, no exaggeration in declaring, that taking into the account the time that many

mills are stopped by back water, and the permanent loss of power from the height at which the wheels are hung in order to avoid this difficulty, that from one fifth to one third of the power is absolutely lost; an evil which is completely obviated by this invention.

All the time in which the wheel is retarded by back water a large quantity is constantly running to waste; this invention accomplishes its removal by the application of a portion of this superabundant water, which would otherwise run over the dam.

The annexed plate will show the operation of this principle in removing back water. The construction of the floom, and raceway, differs from the common form, by having a tight tube, A, running from the bottom of the floom, as at D, to or past the centre of the bottom of the wheel, and of about four times the size of one which would be necessary to turn the wheel. The size of the tube may vary according to the back water common to the mill. The lower end of the main tube, A, being in a direct line to that of the horizontal tube, B, will direct the water which rushes down the former through the latter, and at the same time overcome the pressure of the water and atmosphere at C, so that the atmosphere may act upon the back water which had collected round the bottom of the wheel, and force it through the tube, B, which, being one third larger than tube A, will admit enough of the back water at the opening, F, to fill the tube B, and thereby, in a few minutes, to entirely remove it from the bottom of the wheel; and the water which has been expended in moving the wheel, will join the current at F, and pass off through the tube B. The bulk head, G, must rise above the extreme height of the back water, for, as there is no other passage for the water to escape from the wheel than through the tube B, there should be no other through which, in times of back water, it can pass to

the wheel. When the freshet is over, and the water has found its lowest level, the horizontal gate, D, should be shut, and the water which carries the wheel will run off through the tube B.

This method of removing back water will not apply to tide mills, except where there is a great surplus of water: in that case, by adopting this plan, the mill may be made to go sooner and later than it otherwise would. Where the tide rises at the tail of a common mill, this principle may be applied to great advantage, as the wheel, in many situations, may be set two or three feet lower than what it commonly is, and by driving off the back water occasioned by the tide, the extra power which is gained by increasing the fall, will be much more than the loss of the water expended in drawing off the back water at high tide.

II.

A case of INGUINAL ANEURISM, *communicated to the Editors of the Register. By* WRIGHT POST, M. D. *Fellow of the Literary and Philosophical Society of New-York, joint Professor of Anatomy, Physiology and Surgery in the University of the State of New-York, &c.*

HARMAN ALLEN, a labourer, aged forty-one years, was admitted into the New-York Hospital, October 15th, 1813, with inguinal aneurism on the left side. About three and a half months previous to this period, he felt, as he described it, an aching kind of pain in the part, and, six weeks after, he discovered a small tumour with a pulsatory motion. From this time the tumour gradually increased, and was attended with considerable pain, especially upon extending

the thigh. The tumour, when he came into the hospital, appeared to be about three inches in diameter, and when the finger was applied to it, a sensation was produced, similar to that which arises from feeling a varicose aneurismal tumour.

Oct. 18. The attending surgeon directed a bandage and compress to be applied, so as to keep up a constant and moderate pressure upon the tumour.

Oct. 31. The pain which the patient had suffered suddenly ceased, and upon examination it was discovered that the strength of the pulsation had much diminished.

Nov. 2. The pulsation considerably increased, though not so strong as at first. The compress and bandage to be continued.

Nov. 4. Pulsation very obscure, pain returned. The tumour not quite so large as it was. Anodynes were directed to be occasionally used to relieve the violence of the pain.

Nov. 10. The pulsation in the tumour has entirely ceased. Pain lessened, but complains of great debility. The use of the bandage to be discontinued.

Nov. 12. Pulsation in the tumour has returned. From this period to the 22d the tumour increased very considerably in size, extending upwards so as to rise above Poupart's ligament.

An operation was now proposed; but the patient, apprehending more from this than from the disease, could not be prevailed upon to submit to what seemed the only probable means of preventing a fatal termination of the disease.

A few days after he was seized with violent pain in the tumour, accompanied with fever, and considerable inflammation and tumefaction about the upper part of the thigh. These symptoms were relieved by a cathartic, anodynes,

and the application of lead water and laudanum to the swelling.

From this time to the 3d of January, there were no occurrences of which it was thought necessary to take any particular notice, excepting that once in the course of December the pulsation in the tumour ceased for two or three days.

Jan. 4. The patient now resolved to submit to any treatment which we thought advisable for the preservation of his life; and the nature of the case could suggest no other than that of tying up the artery above the tumour. It is proper to remark here, that the tumour had extended itself in all directions, but more particularly upwards; so that at this time it had risen rather above a line passing transversely from one anterior superior spinous process of the ilium to the other. This circumstance, it was anticipated, would render the operation more difficult, and perhaps more hazardous, than if the aneurism had been situated altogether below the ordinary course of Poupart's ligament, as it would oblige me to seek for the external iliac artery higher in the abdomen, and of course in a situation more remote from the anterior parietes of this cavity. The condition of the patient, however, made it necessary to make the attempt, and accordingly I performed the operation this day at 12 o'clock.

An incision was made through the integuments with some degree of obliquity, between three and four inches long, beginning a small distance above the tumour, and extending upwards externally to a middle line between the umbilicus and superior anterior spinous process of the ilium. The abdominal muscles were then cut through until the peritoneum at the lower part of the wound was fully exposed. I next endeavoured to detach this membrane from the crural arch so as to get at the artery without opening into the

cavity of the peritoneum; but in this attempt I was frustrated. The strength and thickness of the peritoneum at this part was considerably greater than natural, and its adhesion to the ligament so firm, that the separation, which is ordinarily so easily effected, was found in this case altogether impracticable. This condition of the parts may reasonably be ascribed to the pressure of the aneurismal tumour. To arrive at the artery, therefore, under these circumstances, it was necessary to cut through the peritoneum, and thus expose the patient to the additional hazard of inflammation of this membrane, to which it is generally supposed to be very liable when an opening is made into the common cavity of the abdomen. But to accomplish my object, there was no alternative. I did not hesitate, therefore, in proceeding with the operation in this manner.

Upon the division of the peritoneum, a portion of the omentum protruded. This was easily returned, and upon introducing the finger, the artery was readily felt. I next endeavoured to detach the peritoneum and sheath from the artery; but every effort that I could make with the nail of my finger for this purpose was unavailing, and the artery was too deep to admit with safety the application of any other instrument, without increasing the division of the peritoneum to an extent that I thought would be too dangerous. It only remained, therefore, for me to endeavour to pass the ligature under the artery, by pushing the needle through the coverings of this vessel. To effect this, I placed the point of my finger upon the inside of the artery, which was to serve as a director. I then conveyed the needle, armed with a proper ligature, to the point where I wished it to penetrate, and with a moderate force, it pierced the covering of the vessel, and passing under the artery, was brought out on the outside of it. The means employed for passing the ligature under the artery, was the apparatus suggested by Dr.

Physick, of Philadelphia, and lately represented in a plate annexed to a case of inguinal aneurism, in which it was successfully applied by Dr. Dorsey, of the same city. The advantage of such an instrument, in this operation, and the perfect adaptation of it to the circumstances of the present case, affords me the pleasure of offering my testimony in favour of its utility.

In tying the ligature, care was taken to avoid including any portion of the intestines which were now in contact with the fingers; and upon drawing it sufficiently tight, the pulsation in the tumour entirely ceased. The wound was now dressed by bringing the lips together, and retaining them in contact by strips of adhesive plaster, over which a light covering of lint was applied, and kept in its situation with the T bandage, and the patient was carried to his bed.

The patient complaining of great pain in the wound, he was directed to take fifty drops of laudanum, and twenty additional drops every hour till ease was obtained. The limb of the affected side was covered with carded cotton, to preserve as much as possible a due temperature.

Five o'clock, P. M. The anodyne has lessened the pain very considerably.

Eleven o'clock, P. M. The patient is quite easy, and the limb retains its natural warmth.

Jan. 5, nine o'clock, A. M. He slept a little at the latter part of the night. Complains of more pain in the wound, which is increased by a cough, that has been troublesome to him towards morning for some time past; and in the effort to expectorate a slight nausea is felt.

Twelve o'clock, A. M. He appears much easier. Pulse 85. Skin a little heated. Bowels constipated. Directed to take an infusion of senna with manna and cream of tartar dissolved in it, in divided doses, until it should produce its desired effect.

Ten o'clock, P. M. The purgative has not operated, and he complains of more pain in the wound.

Jan. 6, 1 o'clock, A. M. No evacuation yet from the bowels. Pulse full, tense, and increased in frequency. The pain more violent in the wound and the neighbouring parts. An enema was prepared to be given him to relieve the constipation, but he would not consent to its administration.

Nine o'clock, A. M. The cathartic began to operate about two this morning, and produced frequent and copious dejections. Pulse less frequent: skin moist.

Twelve o'clock, A. M. Stools continue frequent, but he is quite comfortable in other respects. To restrain the frequent evacuations, he was directed to take, after every stool, a table spoonful of the following mixture.

℞. Tinct. Opii gtt. LX.
Aq. Menth. ℥iij. M.

Nine o'clock, P. M. One spoonful of the anodyne mixture answered the purpose for which it was given. He now complained of numbness in the leg, but more particularly in the foot, which was followed immediately by palpitation at the heart, and a feeling of faintness: pulse very irregular. This state continued about ten minutes. As he recovered, he complained of sickness at the stomach, and a constant desire to vomit. He took a little mint water, and in about twenty minutes the pulse became regular, and the nausea went off.

Twelve o'clock, P. M. Pulse rather full and frequent: skin heated.

Jan. 7, nine o'clock, A. M. He was attacked about three o'clock this morning with hiccough, which has continued more or less troublesome, attended with heartburn. Pulse 75, and soft; skin moist; bowels open. Let him take half a drachm of calcined magnesia.

Twelve o'clock, A. M. The magnesia has removed the heartburn. The dressings were now removed, and the wound found generally united by the first intention. The wound to be dressed as in the first instance.

From this day till the fifteenth of January, there were no occurrences deserving any particular notice, except the hiccup, which continued, with short intermissions only, till this period. This affection was seldom very violent, but it seemed uncontrollable, in a great degree, by any of the remedies which are usually employed for its mitigation or removal. The patient this day complains of a numbness in both inferior extremities. His pulse is natural. The tumour is considerably diminished.

Jan. 17. At the dressing of the wound to-day, the ligature came away. From the application of the ligature to the present period, there has never been any sensible difference between the temperature of the limb of the affected side and that of the other.

Jan. 18. His rest was disturbed last night by a pain on the outside of the left foot.

Jan. 19. Notwithstanding the application of an anodyne liniment, which was directed for the pain in his foot, it was still troublesome during the last night; but he is now nearly free from it. The tumour daily lessening.

Jan. 20. The patient again complains of pain extending from the knee to the foot; but is in every other respect very well.

Jan. 21. Rested well last night, the pain having entirely subsided.

Jan. 23. Had a very restless night, in consequence of pain in the hypogastric region. Bowels regular: has no fever, but complains of great soreness when pressure is made upon the lower part of the abdomen. Let a blister be

applied to the pained part, and a dose of castor oil administered.

Jan. 24. Has less pain than yesterday, and complains less of soreness. The oil operated twice.

Jan. 26. Some uneasiness is still occasioned by pressure in the neighbourhood of the wound; and he complains of restlessness, and sickness at the stomach when he awakes from sleep.

Jan 28. The patient still complains of a sense of general and indescribable uneasiness, and of a pain extending from the groin to the knee.

Jan. 30. Since the last report he has improved so much as to sit up in a chair sometime to-day. His appetite is good; bowels regular; sleep natural.

Feb. 9. The patient is able to walk; but this action produces pain in the course of the muscles on the interior part of the thigh.

Feb. 24. An eruption has appeared on various parts of the body, but he feels no inconvenience from it. All the functions of the body are well, and regularly performed.

March 3. Complains of stiffness and soreness in his limbs. Blotches have appeared on different parts of the body. Let him drink the decoct. lignorum, and apply the ung. citrin. to the cutaneous affection.

March 9. The patient this day showed three or four ulcerations in the right axilla, with an enlargement of the glands of this part. These appearances led to a suspicion that their cause might be venereal; and, on inquiry, it was found that he had had syphilis, in the form of chancre, eighteen months ago; for which he took a decoction of the bark of sassafras, and some other remedies, all of which were not continued more than a week; and he does not know that there was any mercury among the remedies which had been prescribed for him. From these circumstances it

was thought advisable to put the patient on the use of mercury in addition to his other remedies.

The case now becoming an ordinary syphilitic one, it is not necessary for me to take any further notice of it as such.

March 22. The aneurismal tumour, which had been gradually diminishing, is harder, and is a little increased in size; but he complains of no pain in it.

March 24. A very distinct pulsation is perceptible in the tumour; but the hardness is less, and the size is diminished. The freedom with which he can use his limb is increasing every day.

It has not occurred, I believe, in any case of inguinal aneurism hitherto noticed, after the operation has been successfully performed, that a pulsation has returned in the tumour. But it is an event we might naturally expect sometimes to take place, where the anastomosing branches of the arteries should happen to be either unusually large or numerous. That one or the other, and perhaps both, of these conditions of the arteries, obtained in this instance, is rendered in some degree probable, from the circumstance of the temperature of the limb undergoing no perceptible change after the ligature was applied to the artery.

It is now near three months since the tumour began again to pulsate, but there has certainly been no increase in the size of it, in consequence of this greater freedom with which the blood is determined to it, and the limb is so far recovered in its powers, that the patient is sensible of no difference between the strength and action of this and the other. But as it may be supposed that the anastomosing arteries may still increase in diameter, will there not be danger hereafter of an enlarging aneurism, when the blood shall arrive at the tumour in increased quantity, and with augmented impetus? If we had no fact to assist us in forming an opinion upon this subject, it would be more difficult to offer an answer to

this question. But it is some satisfaction to me to be able to adduce a case which will tend to show that there is little apprehension to be entertained of a future increase of an aneurismal tumour, although a pulsation shall return in it after it had been a long time suspended by tying the artery. The fact to which I have reference, was a case of femoral aneurism, which had been produced by a wound of the crural artery. The disease had existed fifteen years when the artery was tied above the tumour in the usual manner. In this case the ligature upon the artery did not arrest the pulsation in the tumour; it only lessened the strength of it. The patient recovered from the operation in about the ordinary time, and the tumour gradually diminished until it was reduced to a size not exceeding one inch in diameter. It was probable, in this instance, that there was very little direct circulation of the blood from the trunk of the artery above the aneurism to the trunk below; and, therefore, almost the whole of the blood carried to the inferior part of the limb, passed through the anastomosing branches. To this circumstance we must ascribe that condition of the vessels, which allowed the blood to arrive at the aneurismal tumour in such quantity as to keep up the pulsatory motion after the ligature had been applied to the artery. The length of time, too, which had elapsed from the commencement of the disease to the period at which the operation was performed, would greatly favour the enlargement of the anastomosing arteries. It is now near twenty years since the operation was performed upon this man. The limb, which had been rendered wholly useless to him by the immense size of the tumour, and the extreme pain which he had suffered in the latter stages of it, recovered its powers in a reasonable time, and he has continued to use it in all the ordinary exercises of walking, riding, &c. with as much freedom, and as little inconvenience, as before the disease took place.

We have here, then, an instance of pulsation continuing in an aneurismal tumour, after the artery had been tied; but, notwithstanding the tumour has been reduced to a very small size, and although it still retains its original character, it has never showed any disposition to enlarge. After a knowledge of this fact, we may have less to apprehend in cases of aneurism, where the result shall be similar to the cases which I have recorded, than would be justified by mere reasoning alone.

I am aware that the circumstances attending the case of carotid aneurism, which I lately published, will tend to throw some doubts upon the subject; but I consider the after enlargement and rupture of the tumour, in that instance, as the effect of inflammation and ulceration; and not the impetus of the blood derived to it through the anastomosing arteries: for, in this case, the tumour had greatly diminished in size before it began again to increase, and when it did begin to increase, it was attended with heat, pain, and soreness to the touch, which are the usual indications of inflammation.

III.

Case *of* Hydrothorax, *with remarks.* *By* John N. Taulman, A. B. *of Rockland county, New-York.*

The following case occurred at the New-York Almshouse, in the practice of the writer of this paper. Should the editors think it worthy a place in the Register, they will please to insert it.

The subject of this disease was a man of rather delicate habit of body, about thirty-five years of age, and in whom the sanguine temperament is strongly marked. His former occupation was that of a labourer, and he then was in the

habit of using spirituous liquors. When dropsical symptoms first appeared, he had just completed a mercurial course, under which he was placed for the cure of secondary symptoms of syphilis. He was first infected with lues venerea, and had been repeatedly salivated: the principal part of that time he has been in this institution.

About the tenth of May he observed some swelling of his legs: of this, however, as it gave him but little pain, he made no complaint. He had previously observed that his urine had become very much diminished in quantity. In this, he says, he cannot be deceived, so singular was the phenomenon. About three months ago he found that he passed but three or four ounces in the morning, and that with considerable difficulty; as much more was usually voided during the remainder of the day. Things remained in this state till symptoms of hydrothorax appeared.

The œdematous state of his lower extremities had not existed many days, before, as he relates, he discovered some difficulty in breathing after he ascended the stairs. His nights were restless; no sooner did he get into a sound sleep than he was suddenly awakened by a sense of anxiety and difficult breathing, from which he got no relief but by sitting up in bed.

On the 24th of May, his situation became alarming. I found him sitting up, breathing with the greatest anxiety, in which manner he passed the preceding night. He had made several attempts to lie down, but was every time seized with a sense of suffocation, which obliged him to seek the erect posture. His pulse was remarkably full and strong, but not more frequent than natural; his respiration very much hurried, and inspiration short. From these symptoms there was no hesitation in pronouncing his disease effusion in the cavity of the chest, the effect of increased arterial action; and, accordingly, he was immediately let blood to the

amount of oz. xxiv. The oppression diminished while the blood was flowing. A large dose of glauber's salts was prescribed, which operated kindly. The next morning we found him considerably relieved; he had passed quite a comfortable night, and although his pulse had become more full and strong, yet further evacuations by the lancet were considered no way necessary. He was directed to take, to-day, three doses of nitre, each grs. xv.; to abstain from animal food, and to remain quiet. This evening his symptoms returned, but he neglected to call for assistance till early on the morning of the 26th, when his condition was greatly aggravated. He was sitting on his bed, clinching with his hands the head of another bed, and leaning forward with all his weight, thus throwing into action every muscle that could possibly assist in respiration. The lancet was again resorted to, and he lost blood to the amount of oz. xvi.; more blood would have been drawn, for very little alleviation of his distress took place, but the pulse fell considerably. A large blister was immediately applied to his chest, and he was directed to take of the tinct. digitalis, gtt. xl. In the afternoon, Dr. Gilbert Smith, the visiting physician to the institution, was requested to see him. The patient had derived no benefit from the prescriptions of the morning, but in every respect seemed worse; the oppression under which he laboured was extremely distressing. Dr. Smith advised a repetition of bloodletting as the only remedy affording the least hopes of success; a vein was accordingly opened, and he was bled oz. xxxiv. He was considerably relieved during the flowing of the blood; pulsation became smaller and weaker, and he was able to rest in a semi-horizontal posture: a dose of glauber's salts was exhibited. His legs having now become very much enlarged, it was conceived proper to evacuate by puncture the fluid collected in the cellular membrane.

27th. He passed a comfortable night in a semi-horizontal posture. The sal glauberi has produced copious evacuations. The quantity of fluid discharged from his legs is very great. He was now put on small doses of calomel and squills, for the purpose of exciting the various secretions, and particularly that by the kidneys.

28th. He slept soundly, his head not more elevated than usual; breathes naturally; takes a deep inspiration with ease: his pulse has become more frequent and full. He occasionally coughs, and expectorates, with ease, considerable bluish mucus. His urine is increased to double its late quantity. In addition to the calomel and squills, he was directed to take, every two or three days, a dose of glauber's salts.

Notwithstanding these depleting remedies, and abstinence from every thing stimulating, his pulse continued to rise, respiration became more difficult, and the sense of suffocation, in a horizontal posture, in some measure returned. On this account it was thought prudent again to take blood from his arm, to avert the danger with which he seemed to be threatened; and, accordingly, on the 5th of June, he was bled oz. x.: the pulse was reduced to its natural standard, and all sense of straitness of the chest entirely removed. He was directed to continue his remedies, with the addition of the spirit. æther. nitros. to excite more powerfully the secretion by the kidneys.

The œdematous state of his lower extremities has been nearly reduced by the continual discharge of fluid from the punctures. A roller was now applied, and he was directed to bathe his legs frequently in cold water.

Such a strong tendency was there to a return of his disease, that it was found necessary to continue this course till the 25th of June, before he could be considered as secure from a relapse.

June 25. His strength is greatly impaired, he is much emaciated, and the plethora of his blood vessels is diminished. Respiration is natural: cough and expectoration have ceased. He lies down without any inconvenience, and sleeps soundly. The quantity of urine has become natural, and is voided with ease. His legs are restored to their natural dimensions. He was now put on tonic remedies; ginger and the rust of iron were prescribed in doses of grs. viii. each, to be repeated three times a day. He was also directed to drink frequently of the bitter infusion, composed of quassia and gentian, with the addition of rhubarb; to continue the local cold bathing, and to return gradually to his accustomed diet and exercise.

July 10. He is improving rapidly under the tonic treatment. No symptoms of his disease have returned.

The inordinate proportion of fluids which must have existed in this case, cannot be referred to the ingesta as a cause. On the contrary, being excluded from all spirituous and fermented liquors, and indeed from every thing that could have a tendency to fill his system, and having for a long time before the attack almost made mercury his food, we ought, à priori, to expect to find him then less robust than he formerly was; and such actually was the case. The cause, then, of this fulness of the vessels is to be looked for elsewhere. It was before stated, that an interruption in the urinary secretion had existed for some months previous to his illness. Less fluid than natural being secreted by the kidneys, accumulation must have been the consequence, were there no other outlet for the fluids of the system; and evidence of none existed, for his skin appears to have regularly performed its functions.

The warmth of the spring expanding the fluids, already distending the vessels by their quantity, probably acted as an exciting cause. Such, then, being ascertained to be the na-

ture and causes of the disease, the indications of cure were very evident; and led to that free use of the lancet, and other evacuants, called for in all diseases arising from an excessive quantity of fluids.

This case shows the importance and necessity of that distinction in the causes of dropsies, which the books on practice do not generally make, and sufficiently enforce, and which we have never heard more clearly elucidated, than from the practical chair in the College of Physicians and Surgeons.* In this remark we do not intend to include our late distinguished countryman, Dr. Rush, who has happily discriminated between the different causes of dropsies.† Thomas, our latest systematic writer, mentions but one cause of dropsy, debility; and, of course, has but the one mode of treatment. Dr. Cullen, although he enumerates increased effusion among the causes of dropsies, yet, like that of Thomas, his treatment is calculated only for that kind which is the result of debility. Maclean, a late writer on Hydrothorax, observes, that "dropsy may arise either from increased exhalation, or from diminished absorption, or from both." But when he comes to investigate the manner in which this "increased exhalation" is produced, he dwells exclusively on relaxation of the solids concurring with tenuity of the blood, and thus makes dropsy the effect only of debility showing itself particularly in the exhalents and in the absorbents. But we would observe, that dropsies, and more particularly dropsy of the chest, frequently are consequent upon a plethora of the vessels, and a vigorous circulation; that dropsy does not always arise from a laxity of the exhalents, and a torpor of the ab-

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* See also Hosack's Quarterly Report on the Diseases of New-York. Register, vol 3. p. 388.

† See Observations on the Cause and Cure of Dropsies. Med. Inquir. and Observ. vol. 2.

sorbents. The extent to which bloodletting was here carried may, perhaps, at first, seem unadvised and even empirical, but, upon more mature consideration, we trust, will be found fully justified by the nature and causes of the disease.

The grand remedy of Maclean, and on which he places his chief reliance, is the digitalis. By this, in combination with other medicines, he states that he cured several cases of well-marked hydrothorax, and relieved many more. He gives the treatment and termination of above eighty cases, and although he employed venesection in but one, (in which he afterwards regrets he did not employ it earlier and more extensively) yet in the body of his work, he does not seem unfriendly to this remedy. He observes, that "to lay down venesection among the remedies for the cure of this disease may appear inconsistent with the general principles held out, but however this may be, cases will sometimes occur where it may be absolutely necessary, and where safety, nay, *even the life of the patient*, may depend on its timely use; nor will it be found contradictory, on due consideration, to the general plan recommended." He, however, thinks that "very few hydropics will bear the loss of much blood."

With respect to the disease from which our patient had just recovered, when attacked with this more dangerous affection, I would observe, that it was removed by the use of the corrosive sublimate, with the addition of that valuable auxiliary, the decoction of the woods. This form of mercury, which, a few years since,* was recommended as a safe, efficacious, and convenient remedy in the cure of lues venerea, has lately been almost exclusively employed in the alms-house, in all forms of the disease, and with uniform success.

JOHN N. TAULMAN.

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* See an Inaugural Dissertation on Mercury, by John W. Francis.

IV.

Syllabus *of the course of* Lectures *on* Botany, *delivered in Columbia College, by* David Hosack, M. D. *Fellow of the Linnæan Society of London, and of the Royal Medical and Physical Societies of Edinburgh.**

PART I.

STRUCTURE AND FUNCTIONS OF VEGETABLES.

A.

GENERAL DIVISION OF NATURAL HISTORY.

1 Meteorology	History of the	Atmosphere,	
2 Hydrography		Waters,	
3 Geology		Earth,	
4 Zoology		Animal	kingdoms.
5 Botany		Vegetable	
6 Mineralogy		Mineral	

—Divisi n of bodies into *animal*—*vegetable*, and *mineral*, considered—objections to—

Opinions of *Tournefort*, *Linnæus*, &c. examined.—

Minerals—characters which distinguish them from animals and vegetables—

Vegetables—their near approach to the animal kingdom—

Distinctions proposed by

Jungius,
Boerhaave,
Tournefort,
Ludwig,
Linnæus,
Alston,
Hedwig, &c.

* At the request of a number of students of medicine, the present Syllabus of the Course of Lectures on Botany, delivered for a series of years in Columbia College, while the author held the professorship of botany in that institution, is here inserted. It is republished from the copy drawn up and printed in 1795.

Corals and *Zoophytes*, referred by some authors to the vegetable and fossil kingdoms—their *animal* nature illustrated by the discoveries of *Peyssonel, Trembley, Jussieau, Donati, Ellis*, &c.—

B.

COMPARISON OF PLANTS AND ANIMALS.

1 Their origin
2 Growth and manner of receiving nourishment.
3 Food.
4 Climate.
5 Secretion and excretion.
6 Sensation—volition—motion—sleep—watching.
7 Sexes.
8 Propagation.
9 Diseases.
10 Death.
11 Natural decomposition.
12 Chemical Analysis.

CONCLUSION—Animals and Vegetables, links of the same chain of being—objections to, by some Metaphysicians, considered.

C.

GENERAL ARRANGEMENT OF VEGETABLES.

1 Palms.
2 Trees.
3 Shrubs.
4 Herbs.
5 Grasses.
6 Ferns.
7 Fungi.
8 Mosses.
9 Algæ.

—Characters of each illustrated.—

D.

COMPONENT PARTS OF A PLANT.

1 Root.
2 Trunk.

3 Branches.
4 Leaves.
5 Supports.
6 Flower.
7 Fruit.

—Exceptions to—

E.

ANATOMY OF PLANTS.

A.—SOLIDS.

1 Epidermis.
2 Rete Mucosum.
3 Cortex—its inner layer LIBER—
4 Alburnum.
5 Lignum.
6 Medulla.
7 Vasa Propria.
8 Tracheæ, or air vessels—have no existence.—

—Structure and functions of plants illustrated by dissection and experiment—

B.—FLUIDS.

(a.)—NUTRITIOUS FLUIDS.

1 Lymph.
2 Sap.

—Circulation of the sap disproved—doctrine of the Ancients—experiments of HALES, HOPE, WALKER, &c.

(b)—SECRETED FLUIDS.

1 Gums.
2 Resins.
3 Gum Resins.
4 Balsams.
5 Oils—fixed and volatile.
6 Aroma—grateful and poisonous.
7 Water.
8 Vital air.

C.—ANOMALOUS SUBSTANCES.

1 Saline Substances.
  i Sugar,
  ii Manna,
  iii Nectar,
2 Farina,
3 Fœcula,
4 Colouring Matter.
  —Observations on colours, and the principles of dyeing.—

F.

CHEMICAL ANALYSIS OF VEGETABLES.

1 Oxygen,
2 Hydrogen,
3 Carbon,
} Common to all vegetables.

4 Nitrogen,
5 Phosphorus,
6 Sulphur,
7 Acids,
8 Alkalis,
9 Earths,
10 Metals,
} Contained in particular vegetables.

G.

FOOD OF PLANTS.

1 Air,
2 Water,
3 Earth,
4 Heat,
5 Light.
—All necessary to the perfect growth of plants—illustrated by experiments and observations.—
—Experiments of VAN HELMONT,
BOYLE,
HALES,
DU HAMEL,
TILLET,
HASSENFRATZ,
SENEBIER, &c.—

—Chemical Analysis of the *food* of plants compared with the Chemical Analysis of *plants*.—

H.

SOILS.

1 Variety.
2 Composition.
3. Manner of Operation.

I.

MANURES.

1 Animal.
2 Vegetable.
3 Mineral.
4 Electricity.

—Operation of Manures—how far useful or injurious.—

K.

OF THE SEED.

A.—DIFFERENT KINDS.

1 Seed properly so called.
2 Nux.
3 Propago.

B.—COMPONENT PARTS OF THE SEED.

1 Arillus,
2 Hilum,
3 Foramen,
4 Cotyledon,
5 Corculum,
  i Plumula,
  ii Radicula,
6 Corona,
7 Ala.

—Structure and Functions of each illustrated by dissection and experiments.

C.—VEGETATION OF THE SEED.

1 Impregnation.
2 Air.
3 Moisture.
4 Heat.
5 Light, } Not essential to the first growth
6 Earth, } of the Seed.
} Necessary to Vegetation.

—Experiments of CURTIS, &c.—process of Vegetation described.

D.—PROPAGATION.

(a.)—NATURAL PROPAGATION.

1 Seeds.
2 Roots.
3 Suckers.
4 Stems.
5 Bulbs.
6 Leaves.

(b.)—ARTIFICIAL PROPAGATION.

1 Cutting.
2 Layers.
3 Engrafting.
4 Inoculation.

—Structure of Buds—
—Equivocal generation, objections to—

L.

OF THE ROOT.

A.—DIFFERENCE OF STRUCTURE AND SHAPE.

1 Bulbous.
2 Tuberous.
3 Fibrous.

B.—MANNER OF GROWTH.

1 Creeping.
2 Horizontal.
3 Perpendicular.

C.—DURATION.

1 Annual.
2 Biennial.
3 Perennial.

—Exceptions from Culture, Climate, &c.

M.

OF THE TRUNK.

A.—DIFFERENT KINDS.

1 Caulis.
2 Culmus.
3 Scapus.
4 Frons.
5 Stipes.

B.—DIFFERENT SPECIES ARISING FROM—

1 Structure.
2 Height.
3 Direction.
4 Shape.
5 Surface.
6 Composition.
7 Branches.
8 Colour.

—Illustration.—

N.

OF THE LEAVES.

A.—COMPONENT PARTS OF A LEAF.

(a.)—FOLIUM.

1 Its base.
2 Apex.
3 Surfaces.
4 Parenchyma.

(b.)—PETIOLUS.

1 Its shape
2 Length.
3 Insertion.
4 Direction.
5 Surface.

B.—SIMPLE LEAVES.

1 Place of insertion.
2 Manner of insertion.
3 Relative situation.
4 Direction.
5 Shape.
6 Surface.
7 Length and expansion.
8 Substance.
9 Duration.—

C.—COMPOUND LEAVES.

—Degree of Composition.

—Illustration.—

D.—FUNCTIONS OF LEAVES.

1 Use in the vegetable economy as organs of respiration.
2 Influence upon the atmosphere.—
Experiments of MILLER,
HALES,
MARIOTTE,
BONNET,
DU HAMEL,
PRIESTLEY,
INGENHOUSZ,
SENEBIER.

O.

FULCRA, OR MORE PROPERLY *APPENDAGES.*

1 Stipulæ.
2 Bracteæ.
3 Cirrhus

4 Spini.
5 Aculei.
6 Pili.
7 Glandula.—

—Illustration.—

P.

ORGANS OF FRUCTIFICATION.

A.—PEDUNCULUS.

1 Its composition.
2 Place of insertion.
3 Relative situation.
4 Direction.
5 Structure.

B.—RECEPTACULUM.

1 Its composition.
2 Surface.

C.—CALYX.

1 Perianthium.
2 Involucrum.
3 Gluma.
4 Spatha.
5 Calyptra.
6 Volva.

Characters of each.

1 Shape.
2 Number.
3 Divisions.
4 Number of pieces.
5 Situation.
6 Colour.
7 Duration.

D.—COROLLA.

1 Its shape.
2 Regularity.

3 Divisions.
4 Number of pieces.
5 Place of insertion.
6 Colour.
7 Duration.—

E.—STAMINA.

(a.)—FILAMENTUM.

1 Its length.
2 Proportion.
3 Figure.
4 Number.
5 Connexion.
6 Insertion.

(b.)—ANTHERA.

1 Shape.
2 Number.
3 Disposition.
4 Structure.
5 Pollen.

E.—PISTILLUM.

(a.)—GERMEN.

1 Its situation.
2 Structure.

(b.)—STYLUS.

1 Shape.
2 Number.
3 Division.
4 Length.
5 Direction.

(c.)—STIGMA.

1 Shape.
2 Number.—

Sexes of plants—imperfectly known to the ancients—demonstrated by Linnæus—

Experiments of LINNÆUS,
SMITH, &c.

Objections of—ALSTON—
—SMELLIE—
—SPALLANZANI—considered—

G.—PERICARPIUM.

1 Capsula.
2 Conceptaculum.
3 Siliqua.
4 Legumen.
5 Drupa.
6 Pomum.
7 Bacca.
8 Strobilus.—

H.—SEED.

—(SEE K. PAGE 464.)

Q.

INFLORESCENCE.

1 Spadix.
2 Verticillus.
3 Capitulum.
4 Spica.
5 Panicula.
6 Amentum.
7 Racemus.
8 Fasciculus.
9 Umbella.
10 Cyma.
11 Corymbus.
12 Thyrsus.

—Illustration.—
—Calendarium Floræ, &c. &c.

PART II.

SYSTEMATIC ARRANGEMENT OF VEGETABLES.

A.

HISTORY OF BOTANY.

FIRST PERIOD.

I. STATE OF BOTANY AMONG THE GRECIANS.

HIPPOCRATES,	400 years	A. C.
THEOPHRASTUS—"Historia Plantarum"—500 plants	320	A. C.

II. STATE OF BOTANY AMONG THE ROMANS.

DIOSCORIDES—600 plants—	70 P. C.
PLINY—Compilation—1000 plants—	74
GALEN—	131

—Destruction of the Roman Empire—
—Decline of Learning until the eighth century—
—Learning revived by the Arabians.—

III. STATE OF BOTANY AMONG THE ARABIANS.

Translations and compilations from the Grecian and Roman writings—
—Decline of Learning until the fifteenth century—

SECOND PERIOD.

—Age of Commentators and Translators,	1500
BRUNFELSIUS—first accurate prints of plants	1532
First public Botanic Garden at Padua,	1533
CONRAD GESNER—first Museum in Natural History—first suggested a systematic arrangement of plants into class—order—genus, and species,	1560
CÆSALPINUS—improved the proposed classification of Gesner,	1583
F. COLUMNA—first copperplates—improved the genera of plants, and Botanic language,	1592
J. BAUHIN, "Historia Plantarum Universalis,"	1613
CASPAR BAUHIN, "Pinax Theatri Botanici," 6000 plants—with synonymes of the ancients,	1623

PARKINSON—"Theatrum Botanicum," 1640
JUNGIUS—"Doxoscopiæ Physicæ Minores"—containing the first principles of Linnæan classification, 1657
SOCIETIES for promoting knowledge.
Royal Society of London, 1665
Royal Academy of Sciences at Paris, 1666
GREW—"Anatomy of Plants," 1671
MALPIGHIUS—"Anatomia Plantarum," 1675
RHEEDE—"Hortus Malabaricus," 1676
MORISON—"Historia Universalis Plantarum"—a new system of arrangement, 1678
RAY—"Methodus Plantarum Nova Synoptica," 1682
"Historia Plantarum Generalis," 1686
"Synopsis Method Stirpium Britannicarum," 1690
HERMAN, New System—"Flora Lugduno Batava," 1690
RIVINUS, New System, 1690
PLUMIER—"Description des plantes de L'Amerique," 1693
SIR HANS SLOANE—"Natural History of Jamaica," 1696
TOURNEFORT—New System—improved the genera— 1697
KŒMPFER—"Amœnitates Exoticæ." 1712
SCHEUCHZER—Agrostagraphia, 1719
BOERHAAVE—New System, 1720
MAGNOL—New System, 1720
HALES—"Vegetable Statics," 1727
MICHELI—CRYPTOGAMIA, 1729
CATESBY—"Natural History of Carolina," &c. 1731

THIRD PERIOD.

LINNÆUS—Sexual System—
"Fundamenta Botanica," 1735
"Species Plantarum," 1764.
"Genera Plantarum," new edition by Schreber, 1789.
"Systema Vegetabilium," 14th edition by Murray, 1784.
Do. do. by Gmelin, in his "Systema Natura Linnæi," 1791.
"Philosophia Botanica."
"Amœnitates Academicæ," new edition, by Schreber, 1787.
"Flora Lapponnica," new edition, by Smith, 1792.
"Prælectiones in Ordines Naturales," by Giseke, 1792.
&c. &c. &c.
DILLENIUS—"Historia Muscorum," 1741
RUMPHIUS—"Herbarium Amboinense," 1741
HALLER—"Stirpes Helveticæ." 1742

LUDWIG—"Institutiones Regni Vegetabilis," 1742
CLAYTON—"Flora Virginica," 1742
GMELIN—"Flora Siberica," 1747
ALSTON—"Tyrocinium Botanicum," 1753
BONNET—"Recherches sur l'usage des feuilles," 1758
DU HAMEL—"Physique des Arbres."
BERNARD DE JUSSIEAU—"Genera Plantarum secundum ordines naturales disposita." 1759
Do. new edition by Paulus Usteri, 1791.
HUDSON—"Flora Anglica," 1762
ADANSON—"Familles des Plantes," 1763
SIR JOSEPH BANKS, } 1763
DR. SOLANDER, }
JACQUIN—"Historia Stirpium Americanarum." 1763
"Hortus Vindebonensis," 1770.
"Flora Austriaca," 1773.
FLORA DANICA. 1766
SCHREBER—"History of Grasses," 1769
SIR JOHN HILL—"Vegetable system," new system, 1773
AUBLET—"Guiana," 1775
CURTIS—"Flora Londinensis," 1777
"Observations on Grasses, 1790.
"Botanical Magazine," 1793.
"Observations on vegetation," &c. &c. &c.
LIGHTFOOT—"Flora Scotica," 1778
LA MARCK—"Flore Francoise"—new system— 1778
HEDWIG—Cryptogamia, 1782
PALLAS—"Flora Rossica," 1784
L'HERETIER"Geraniologia"—"Sertum Anglicum," 1784
THUNBERG—"Flora Japponnica," 1784
MARSHALL—"Arbustrum Americanum," 1785
DICKSON—"Cryptogamia," &c. &c. &c. 1785
WALTHER—"Flora Caroliniana," 1788
GÆRTNER—"De Fructibus et Seminibus plantarum." —New System, 1788
SMITH—"Reliquæ Rudbeckianæ," 1789
"Icones Plantarum hactenus ineditæ," 1789.
"Icones Pictæ Plantarum Rariorum," 1790.
"Spicilegium Botanicum, 1791."
"Botany of New Holland," 1793, &c. &c. &c.
ENGLISH BOTANY, 1790
WOODVILLE—"Medical Botany," 1790
Transactions of the Linnæan Society of London, 1791
MARTYN—"Flora Rustica,"—"Language of Botany," &c. &c. &c. 1793

B.

LINNÆAN ARRANGEMENT.

A.—ARTIFICIAL, OR SEXUAL SYSTEM.

—Divided into—

1 Classes.
2 Orders.
3 Genera.
4 Species.
5 Varieties.

—Characters of each—

(a.)—CLASSES FORMED FROM

1 The number
2 Place of insertion
3 Proportion
4 Connexion
5 Disposition, &c.
} Of the Stamina.

—Illustration—

(b.)—ORDERS FORMED FROM

1 The number
2 Fertility
3 Situation
} Of the Pistilla.
4 Structure of the Pericarpium.
5 Number
6 Connexion
7 Disposition, &c.
} Of the Stamina.

—Illustration—

(c.)—GENERA FORMED FROM THE ORGANS OF FRUCTIFICATION.

(d.)—SPECIES FORMED FROM

1 The Root.
2 Trunk.
3 Branches.

4 Leaves.
5 Fulcra, &c.

(e.)—VARIETIES—THE EFFECTS OF CLIMATE, CULTURE, &c.

—Illustration—

—Alterations of the Linnæan System, proposed by Thunberg—Gmelin, &c.—

B.—NATURAL ORDERS OF LINNÆUS.

—Illustration—

C.

SYSTEM OF JUSSIEAU.

—Compared with the natural orders of Linnæus—
—Advantages of each.—

D.

—Plants useful in Diet—Medicine—Agriculture, &c. illustrated with practical observations—

E.

—Herbarium—advantages of—manner of preserving and arranging plants—

—CONCLUSION.—

V.

FURTHER OBSERVATIONS *on* MERCURY. *By* JOHN W. FRANCIS, M. D. *Fellow of the College of Physicians and Surgeons of New-York, Member of the Society for the Promotion of Useful Arts in the State of New-York, Corresponding Member of the Massachusetts Historical Society, Fellow of the Literary and Philosophical Society of New-York, &c.*

IN a former volume of the Register,* the writer offered a concise view of the medical history of mercury, from the period of its first introduction into practice, as an article of the materia medica, to the present time, and considered the effects of this mineral, on the human body, in its metallic state. Some observations were also made on the evil consequences arising from the injudicious administration of mercurial preparations, and the inexpediency and pernicious effects of the mercurial practice, in certain febrile diseases, particularly in the treatment of the yellow fever of the United States, were pointed out. On the present occasion it is proposed to consider the principles upon which the curative action of mercury depends, as deduced from its general operation upon the animal system, and from the theory of its action thus attempted to be established, to recommend some alteration in the treatment of a disease of acknowledged specific contagion.

Numerous and discordant are the opinions which have been maintained by professional men on the curative action of mercury in the treatment of disease; and upon an examina-

* Vol. iii. p. 424—447.

tion into the history of this medicine, the most superficial observer will perceive that these different opinions have a relation more or less corresponding with the prevailing theories and physiological knowledge of the times. Upon the first introduction of mercury as an article of medicine, when it was administered in its metallic state, it was supposed to overcome all obstructions by its specific gravity. Upon its more general and successful employment by Paracelsus and others, its action, it was presumed, was readily explained according to the crude and absurd notions of the chemists. After this period its operation, in common with other remedies, was successively elucidated agreeably to the opinions of the humoral pathologists, and the corpuscularian doctrines of the mechanical physicians. Its peculiar action, however, in the treatment of lues venerea, has been more especially the subject of consideration among the most distinguished authors who have written on that disease, as well as of those who have treated of the materia medica. In not a few instances, it has given birth to the most fanciful and erroneous ideas, relative to the pathology and functions of the human system. Even the great Boerhaave, who acquired and appropriated to his own use the knowledge of all preceding ages, "who examined systems by experiments, and formed experiments into systems,"* believing the venereal disease to be seated in the cellular and adipose membrane, conceived its cure was to be effected by melting down the adipose substance by salivation.† And at the present day, after the more recent and popular theories of Mr. John Hunter and of Mr. Benjamin Bell, the modus operandi of this medicine remains a question far from being decided.

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* Johnson's Life of Boerhaave, Works, vol. xii.

† Prælectiones Acad. de Lue Venerea. Prefatio ad Lusini Aphrodisiacum, fol. Lug. Bat. 1728.

Aware of the many difficulties which occur in accounting for the curative action of mercury in the treatment of disease, the writer does not presume to suppose he can remove the obscurity in which this subject is involved: but as the theory of its operation will be the more readily understood in connexion with its effects upon the body, it seems necessary that they should first be briefly mentioned. Passing over the still more recent and more fanciful opinions entertained on this subject, by Doctors Girtanner, Beddoes, Thornton, Blair, and others, a few remarks may first be offered, perhaps with some advantage, upon the respective productions of Mr. Hunter and of Mr. Bell; without the least view, however, to disparage the intellectual labours and numerous scientific discoveries of the former, or the great practical sagacity and eminent professional services of the latter.

Mr. Hunter, entertaining the opinion that no two morbid actions can exist in the system at the same time, maintained that the salutary effects of mercury depended upon its producing an action incompatible with that which already existed; counteracting the venereal irritation by producing another of a different kind. This opinion of Mr. Hunter may, at first sight, appear to derive considerable support from the method of cure which is generally had recourse to in the treatment of some diseases; as, for instance, the removal of glandular obstruction by the influence of calomel on the salivary glands, and the transfer and diminution of a partial inflammation by the operation of epispastics. The general law, however, which he first devised and employed for the explanation of pathology, that two actions cannot be carried on at the same time in the same part, or in the same constitution, remains yet to be established, notwithstanding the great plausibility with which it has been enforced.

It is scarcely necessary to remark, that so far as it regards inanimate matter, this principle is altogether inadmissible, as is abundantly proved by the doctrines of projectiles. The history of diseases also demonstrates that this law is unfounded, and particularly of those arising from a specific material. That the human body is susceptible of the operation of two distinct contagions at the same time has been satisfactorily shown by the facts recorded by Dr. Patrick Russell, of the small pox and measles which prevailed at Alleppo, in 1765.* On the authority of Bergius and Tandon, mention is made of several cases in which the measles and small pox appeared together in the same individual.† Dr. Willan witnessed the occurrence of hooping-cough (a disease of acknowledged specific contagion) during the eruption of the small pox in the same person; the former disorder remained a long time after the latter without any material alteration.‡ Cases of small pox combined with measles came under the notice of Dr. Walker.§ Desessarts mentions the complication of small pox with scarlatina.‖ Mr. Leese inoculated an infant while labouring under measles, and both diseases went through their ordinary course.¶ Two cases which exhibited unequivocal evidence of the possibility of two distinct diseases, small pox and measles, arising at the same period in the human constitution, and each preserving its ordinary course as when separately existing, attended with all their usual characteristic

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* Trans. of the Society for the Improv. of Med. and Chirurg. Knowledge, vol. 2.

† Ring's Observ. on Inoculation; London Med. and Phys. Journal, vol. 14. p. 142.

‡ Reports on the Diseases of London, p. 38.

§ Inquiry into the Small Pox. See also London Philos. Trans. No. 429.

‖ Journal de Med. t. 49. London Med. Rev. vol. i. p. 313.

¶ Lond. Med. and Phys. Journ. vol. 4. p. 18.

symptoms, are recorded by Dr. Tracy.* A number of cases of small pox co-existing with measles, and the two diseases going through their regular stages in the same individuals, occurred at the Foundling Hospital, at Dublin, as appears from extracts from the memoirs of the Medical Society of that city, communicated by Dr. Rainey.† All these instances of the continued operation of measles with other disorders of specific contagion, it will be proper to bear in recollection, are cited from modern authors: the opinions of the more ancient writers on this point being disregarded on account of the errors into which they were led from adopting the principles of the Arabian physicians, and considering and generally treating these different specific disorders, small pox, measles, and scarlatina, as modifications of the same disease.‡

Mr. Maurice vaccinated two persons who had been previously exposed to measles. The vaccine infection and the measles went through their usual course at the same time.§ It appears from the observations of Dr. Woodville, Dr. Willan, and other writers on the cow pox, that if the constitution be submitted simultaneously to the action of the small pox and vaccine diseases, that these disorders go through their course at the same time without influencing each other ‖ Many cases of this kind might be mentioned.

In the report of the New-York City Dispensary, published July, 1809, the physician of the cow pox department

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* Mitchill and Miller's Med. Repos. vol. 3. p. 105.

† Duncan's Med. Commentaries, vol. 3. p. 444; Macbride's Practice of Physic, p. 376.

‡ *Vide*, Sennertus, Med. Pract. vol. 4. cap. xii. Diemerbroeck, Tract. de Variol. et Morbil. cap. xiv.

§ Lond. Med. and Phy. Journ. iv. p. 38.

‖ Reports on the Diseases of London, p. 313. Woodville's Reports for a series of Inoculations for Variolæ Vaccinæ, p. 145, &c.

recorded the case of a child who, on the eighth day after it was vaccinated, had the vaccine disease with all its characteristics, and, at the same time, laboured under a "plentiful eruption of small pox," to which disorder it had been exposed by an imprudent visit some days previous. The two diseases appeared entirely distinct and independent of each other. The physician vaccinated six children from the fluid of the vesicle, who all had the regular cow pox, and were afterwards tested by the small pox inoculation without effect. Several children were inoculated with the matter from the small pox eruption who took the disease in its usual form.* Dr. Adams himself, the unqualified and indiscriminate panegyrist of the doctrines of Mr. Hunter, asserts, that small pox and cow pox "will proceed together in the same person without the smallest interruption to each other's course."† Instead, however, of admitting the validity of the fact, in opposition to the universal law of Mr. Hunter, Dr. Adams declares that this circumstance only proves the *identity of the two morbid poisons.* Admirable dexterity of reasoning!

If the constitution, imbued with the peculiar matter of any of the diseases of specific contagion, or under the action of the venereal virus, were on this account, during the presence of such peculiar specific matter, not susceptible of the influence of other diseases of a specific origin, who would not have observed the instances of exemption from the operation of contagious and infectious diseases, and have ascertained and made known so singular and specific a cause? Who is prepared to say, that the individual labouring under

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* Gillespie's Report on the Cow Pox, in Mitchill and Miller's Med. Repos. vol. 13. p. 87.

† Observations on Morbid Poisons, 4to. p. 398. See also his Popular View of Vaccine Inoculation, p. 41.

lues venerea is, on that account, exempt from the influence of small pox; or that he who is infected with small pox is secured from the attacks of plague or yellow fever?

The hypothesis of Mr. Hunter, however, whether it be correct or not, is irreconcilable with another principle which he himself has elsewhere adopted, that the venereal disease often becomes the immediate cause of other disorders, by calling forth latent tendencies into action, as he here admits the concurrence of two distinct actions. "I have seen in many cases," says he, "the tendency so very strong, that it has taken place *before the venereal has been entirely subdued.*"* But enough has been said to prove the co-existence, in the same individual, of diseases essentially different in their peculiar character, and arising from the operation of distinct specific causes.

Agreeably to the law which Mr. Hunter laid down, the method of treatment in the venereal disease is by counter irritation, and to excite an irritation greater than that of the venereal. Let this principle be granted as well founded, and it need not here be stated how extensive would be the class of anti-venereal remedies. If the salutary effects of mercury depended upon its producing irritation, then other medicines acting as irritants would occasion similar happy effects. Even fever itself, the effect of irritation, might be of the number of anti-syphilitic remedies; yet, in the treatment of lues venerea, it is one of the most common objects of the physician's attention to subdue and guard against fever, as well as other sources of irritation. But the premises on which this ingenious author proceeds cannot be granted. "The removal of venereal action by mercurial action (to quote the language of an able critic) is gradual and progressive; the mercurial must, therefore, exist along with the ve-

* Hunter on the Venereal, p. 26.

nereal, until the latter is entirely overcome; and if these actions were not at certain periods co-existent, the cure must be accomplished in a moment, or it could not be accomplished at all."*

The theory supported by Mr. Bell, that mercury acts as an antidote in the cure of the venereal disease, is no less untenable than that of Mr. Hunter. The experiment, which he has considered as decisive, of the matter of lues venerea on being mixed with triturated mercury (Plenck's solution) becoming inert, and, consequently, incapable of producing disease, can be admitted only as a species of chemical agency upon inorganized materials, and will by no means apply to the organized animate body. The assumption that such an operation takes place in the human system is altogether gratuitous. If, again, the principle just stated were true, that mercury possesses a peculiar "antidotal" or neutralizing power, similar to the operation of an alkali upon an acid, the particular activity and the advantages which certain preparations of this metal possess, might be regarded as of no practical importance, and corrosive sublimate and the crude mineral be employed without distinction: the successful treatment of this disease would uniformly depend upon the *quantity* of mercury administered. But this would lead to the adoption of a practice at variance with the experience of several very eminent writers, and one which Mr. Bell himself thinks proper to guard against:† and, indeed, the very small quantity of corrosive sublimate which is necessary to effect a cure, renders it almost certain, as remarked by Dr. Cullen,‡ that mercury does not cure the disease by

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* London Med. Review, vol. 1. p. 202.

† Bell on Gonor. Virul. and Lues Ven. vol. 2. p. 259.

‡ Cullen's Mat. Med. vol. 2. p. 254.

being an antidote to the poison. The arguments in support of this theory, derived from the operation of mercury when locally applied, are not to be considered as of any importance; local disease may frequently be changed and effectually cured by the application of local remedies. The venereal disease can be removed by such remedies only as produce a general action upon the whole constitution, the medium through which the morbid matter is diffused, and upon which it exerts its destructive influence.

Firstly, In what manner does the poison of specific diseases operate upon the human constitution? and,

Secondly, What are the changes effected in the system by the influence of mercury?

Little, indeed, is known concerning the peculiar nature of the virus of specific diseases: the action which takes place upon the application of the smallest particle of morbific matter to the human body, and the process by which it generates disease, converting a local into a general disorder, and thus producing an altered and vitiated state of the whole system, it must also be admitted, are neither very obvious to the senses, nor very clear to the reasoning powers of man. The effects themselves, however, have been long and familiarly known; and from duly considering these, a rational theory may, perhaps, be formed of the manner in which they are produced.

That the poison of specific diseases, as that of lues venerea, small pox, &c. diffuses itself through the whole constitution, and assimilates unto its own nature the general mass of circulating fluids, seems to be most consonant to all that is understood of their peculiar character. Upon the introduction of a particle of variolous matter into the system, an inflammatory action of the part, into which it is inserted, is excited; by which action new morbific matter of the same nature is generated. This process may be carried on to a

greater or less extent, in a longer or shorter time, in different persons, before the specific material enters the absorbents; and hence local inflammation is, in some cases, considerably advanced before the system becomes affected; while, in others, the eruptive symptoms supervene when it appears to have made very little progress.* The morbid poison, modified in its action by its degree of acrimony, the condition of the part, and habit of body, is taken up by the absorbents and enters the blood-vessels; whence it is received into the general circulation, and produces its peculiar effects upon the constitution. The fluids, therefore, are thus necessarily first affected, and, as a consequence of their morbid condition, the solids themselves next become vitiated. Hence the multiplication of the matter of variolous contagion in inoculated small pox; and hence, on the same principle, the generation of morbific matter, from a similar action, arising from the introduction of other specific contagions.

By the introduction of a specific morbid matter into the body its condition is changed from a healthy to a diseased state, the local is converted into a general disorder; the fluids, and ultimately the solids, become affected; and, according to the particular virus introduced, the whole constitution partakes, in a greater or less degree, of its peculiar nature, whether it be small pox, lues venerea, measles, &c.

The most satisfactory idea, perhaps, that can be formed of the action of morbific poisons on the body, is that of a *ferment*, or rather *an assimilating process*. That such a process does, in certain diseases, take place in the living system has been maintained by many of the most distinguished writers. "It is evident," says Dr. Cullen, "that the contagion of the small pox is a ferment with respect to

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* Woodville's Reports on Cow Pox, p. 15.

the human fluids, and assimilates a great part of them to its own nature."* "Fermentation," remarks the celebrated Mr. Cruickshank, "has been chiefly observed in dead matter, but may also take place, and I believe certainly does take place, in living matter."† In his observations on the action of variolous contagion upon the blood, the most apt idea we can form of it, observes Dr. Walker, "is that of a ferment."‡ See also the experiments of Sir John Pringle,§ and of Dr. Alexander.‖

Mr. Benjamin Bell, though he readily admits that the matter of *all* contagious diseases, and more especially that of lues venerea, has a power of assimilating to its own nature a "certain portion, and ultimately, perhaps, the whole fluids of the body,"¶ cannot easily suppose how such a process can take place in fluids in motion, rest being essentially necessary for promoting fermentation. That the matter of certain specific diseases is conveyed through the circulating fluids, is abundantly evident from the condition of the axillary and other glands in different parts of the body, in small pox, lues venerea, &c. The rapidity with which deleterious and other substances are absorbed and taken into the sanguineous circulation, has been long known, and, lately, satisfactorily shown by the interesting experiments of Delile and Magendie.**

Were the assimilating or fermentative action confined merely to a particular point in the cellular texture, where the specific cause was first applied, how would it be practi-

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* First Lines, vol. 2. Chap. on the Small Pox.

† Anatomy of the Absorbing Vessels.

‡ Inquiry into the Small Pox, p. 49.

§ Diseases of the Army, Appendix.

‖ Experimental Essays, p. 15, &c.

¶ Treatise on Gonor. Virul. and Lues Ven. vol. 2. p. 164.

** Amer. Med. and Phil. Register, vol. 1. p. 426.

cable to account for the generation of new and similar matter in other and distant parts of the body, as for the occurrence of confluent small pox after inoculation. The morbific poison enters the blood, and necessarily combines with some of its constituent parts; if so, it must accompany, and operate upon, this fluid in its general circulation through the system. That this opinion is not hypothetical, but founded on accurate observation, many established facts might be adduced to prove. The effects of the variolous infection on the mother and fœtus in utero, are capable of explanation upon no other principle than that the blood itself is in a morbid state, and assimilated more or less unto the nature of the variolous disease. The free and *direct** communication which exists between the mother and child, while in the fœtal state, will readily be the medium through which the matter of specific diseases exerts its operation upon the impregnated uterus. Dr. George Pearson has recorded many well-authenticated cases, in which the infection of small pox was communicated to the unborn infant, and the matter taken from the pustules on the fœtus, by inoculation infected others.† Two instances of the effects of the variolous contagion upon the pregnant mother and child occurred in the practice of Dr. Hosack, in 1791.‡ Two striking cases of the small pox virus affecting the fœtus in utero were lately published by Dr. Jenner.§ In the first case the infant sickened on the fifth day after birth, and on the seventh well-formed pustules of small pox appeared: the virus was communicated to others by inoculation. In the second case the child

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* MS. Notes on Hosack's Lectures on Pract. of Physic, and on Midwifery.

† Duncan's Medical Commentaries, vol. 19. p. 213. &c.

‡ Duncan's Med. Commen. vol. 19. p. 249.

§ Med. and Chirurg. Trans. vol. 1. See also Eclectic Repertory, vol. 1. p. 4.

upon birth had many eruptions on it, bearing much the appearance of small pox in the early stage of the disease. On the fourth day after birth, "I found," says Dr. Jenner, "the eruptions had increased to some thousands, perfectly distinct, and their character well marked." "To put the matter beyond all doubt," continues Dr. J. "I armed some lancets with the virus and produced the small pox by inoculations with it." Other facts of a similar nature may be found recorded by Mead,* Ludwig,† Burserius,‡ Baron Dimsdale,§ Mr. Hunter,‖ Haygarth,¶ and other distinguished authorities.

In like manner the circulating fluids may become vitiated and assimilated in their nature to the virus of *lues venerea.* The local effects of the disease will appear at different periods in different parts of the body, according to their peculiar susceptibility. The fœtus in utero may also become affected with the poison of the disease, and exhibit symptoms similar to those which arise from the same cause at other periods of life. The general experience of the most eminent practical authors, (with the exception of Mr. Hunter,) has so well established the fact that little further need be said at present concerning it.** The venereal disease may be communicated to the fœtus in utero, and the healthy child after birth may become affected with the same disorder by sucking an infected nurse. Two remarkable cases, in confirmation of the fact last mentioned, occurred in the practice of Dr. Hosack, in the spring of 1807. A healthy

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* Discourse on the Small Pox, chap. iv.

† Adver. Med. Pract.

‡ Institutions of the Pract. of Med. vol. 3.

§ Treatise on Inoculation.

‖ Philos. Trans. vol. 70.

¶ On the Small Pox.

** *Vide* Mahon on the Ven. Infect. in Pregnant Women. Lond. Med. Rev. vol. 2. p. 44.

infant, born of respectable parents, was placed under the care of a wet nurse, and in about four weeks after, eruptions appeared in different parts of its body. The ordinary alteratives were had recourse to without effect: the child became worse; ulcers on the throat and other symptoms strongly resembling those of lues venerea were observed. Mercury was now administered in the form of the solutio oxymur. hydrargy. by which the disease was completely removed. Suspicions being thus confirmed as to the nature of the disorder, the infected nurse was dismissed, with an injunction to undergo a mercurial course. Shortly after, and regardless of advice, she entered into another family in which she again communicated to a healthy sucking infant the venereal disease, which yielded only to the operation of mercury. These two cases render it no longer problematical, but unequivocally prove that an infected nurse may, merely by her milk, communicate a specific disease to her nurseling. They also, still further, render valid the opinion, that not only the blood but the secretions may, to a certain degree, be assimilated in their nature to the virus of certain morbific poisons.

It is asserted by the advocates of vascular spasm, that assimilation is founded on an erroneous and vulgar analogy between a merely chemical action and the operation of the animated body; and it has been urged with much force as an objection to the doctrine of a fermentative or assimilating process taking place in the living system, that such process is always accompanied with ebullition and the extrication of air, phenomena incompatible with the due performance of the functions essential to animal existence. Surely those who have considered this objection of importance have not attended to the ordinary changes which wine undergoes during its *secret* fermentation, as it has lately very properly been denominated; for in these changes neither ebul-

lition nor motion is necessary to the fermenting process by which the wine is matured. "Ebullition, or any evident motion," observes Mr. Cruickshank, "is not necessary to constitute fermentation; after wine has undergone what is called its open fermentation, it continues, after it is bottled, to go through its *secret fermentation*, where no motion is evident, and every body knows requires time to ripen."* Even granting that the extrication of a portion of air is necessarily, at all times, connected with the assimilating or fermentative process, it forms no argument against the principle here advanced: air conveyed slowly into the blood vessels is not destructive to animal life, a fact, which the experiments of Redi, of Florence, and other eminent naturalists have fully established.†

There are two or three other objections urged against the doctrine of assimilation which shall be considered rather on account of the high authority of their author, than of any weight in themselves. In his valuable paper on the origin of contagious and new diseases, Dr. Ferriar asks, "does contagion assimilate all the fluids to its own nature?"‡ The objections which he considers of great force against this doctrine are, that many phenomena in the symptoms and cure of fevers point out a spasmodic affection, or diseased action of the extreme blood vessels as the real cause of fever. In answer to this it may be observed, that the existence of spasm, as essential to the character of fever, rests upon the hypothetical views of those who considered diseases as exclusively affecting the solids, a theory, the absurdity of which has long ago been pointed out. "This affection

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* Anatomy of the Absorbing Vessels.

† Redi, vol. 4. p. 223. as quoted by Sir John Pringle; Diseases of the Army, Appendix, paper vii.

‡ Med. Hist. and Reflect. vol. 1. p. 280. 2d. ed.

[a spasmodic affection] is supported," adds Dr. F. "by the action of contagion, and, perhaps, is strengthened as more contagion is produced." According to this principle, spasm must be the prominent symptom the physician has to subdue in the treatment of contagious diseases, and this spasmodic effect will be the more violent in proportion to the virulence of the particular poison by which it is produced. But where are the facts which warrant conclusions of this nature? Does not the history of contagion uniformly prove its operation on the human constitution to be powerfully debilitating and depressing, and establish a pathological principle directly the reverse of the one maintained by Dr. Ferriar?

Were the fluids infected, observes Dr. F. a patient would not cease to infect others till the whole mass was changed.* It is certainly matter of surprise that this argument should have been offered by a writer who has so long been practically conversant with the operation of febrile infection, and who is so fully aware how numerous are the circumstances which modify the communication of contagious disorders. Why the infected body does not, in *all stages* of disease, infect the bodies of others, is a problem, the solution of which is no less difficult than why contagious diseases themselves do not uniformly operate upon the constitution of all who come within the sphere of their influence. Of the various diseases of specific contagion, small pox is justly considered the most virulent in its nature and the most universal in its operation: yet the many cases of exemption from the action of variolous contagion, particularly of those recorded by Dr. Lind,† will assuredly not lead to the absurdity of

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* Med. Hist. and Reflect. *loc. cit.* p. 281.

† Papers on Contagion and Infection.

denying the specific character of the disease, and that it is propagated by contagion.

Judging from the following passage, which occurs in the essay from which the preceding quotations have been made, it would seem that Dr. Ferriar is by no means convinced of the soundness of his own reasoning. He here appears the decided advocate of the very principle which he elsewhere opposes. "It is peculiar to the animal poisons," says he, "that they not only give rise to a disease similar to their original, but that, however small the quantity applied, *they convert a large portion of the fluids to their own nature.*"*

Analogical proof in support of the doctrine of assimilation might be adduced from considering the changes which the different articles of food undergo when converted into chyle; but the facts already advanced render, in the opinion of the writer, the existence of such a process no longer controvertible.

It appears, therefore, from the changes which take place in the healthy constitution upon the introduction of the peculiar virus of lues venerea, small pox, measles, and other diseases of specific contagion, and from the nature of the alteration which is thereby effected; from the conversion of a local affection into a general disorder, and the multiplication of the particular morbific matter throughout the system; from the communication in all cases of the same specific disease, by inoculation, through the medium of the general circulation, and by the secretions, and from other phenomena which characterize these disorders, that the fluids of the human body are susceptible of material alteration even in the living state: that this alteration uniformly partakes of

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* Med. Hist. and Reflect. *loc. cit.* p. 278.

the nature of the morbific matter introduced; that the materies morbi thus generated is alone capable of propagating a disease in another constitution, in all respects of the same character, and none other; in fine, that the circulating mass of the system does become assimilated in its nature to the virus of specific or contagious diseases, and, as a consequence, that the solids themselves also become affected. For such is the general law of the animal economy, modified by the living principle, that the action of one part is subservient to that of the other; while they regularly harmonize in health, they all are acted upon by disease. It has justly been observed, "an exclusive theory, either of solidism or humorism, is a solecism in pathology."

As this alteration in the healthy state of the system, which follows upon the operation of the virus of diseases of specific contagion, is characterized by a regular and peculiar train of phenomena, from observing these effects thus constantly produced, many attempts have been made to ascertain the particular cause. The explanation which has just been offered, seems to convey the most accurate idea of the kind of action which takes place; that the specific matter of these diseases acts as a *ferment*, and by the process consequent thereon, assimilates the system to their own peculiar nature. Doubtless this process is more or less governed by the living principle; and as chemical writers have observed different species of fermentation in inanimate materials, so also pathologists will admit a modification of the same action when occurring in living organized matter. "All that is necessary in fermentation," says an able philosopher already referred to, "is, that the elementary particles be separated and recombined, so that the matter be converted into something different from what it was before."* From

* Cruickshank's Anatomy of the Absorbing Vessels.

the refutation that has been given of the chief objections to this theory, the reader will have already understood the principles upon which it rests.

Secondly. With regard to the changes effected in the system by the influence of mercury.

Mercury, in the state of an oxide, is one of the most universal stimulants. Its action, though primarily on the nervous system, is communicated to every fibre of the body, and produces a degree of restlessness, anxiety, and debility. When taken into the system, it manifests itself by a quickened circulation, gives the blood the disposition to take on the buffy coat when drawn, renders the pulse frequent and harder, increases respiration, excites the temperature of the body, occasions a whitish fur on the tongue, and other symptoms of general inflammatory action. Its effects upon the secretions are still more apparent, producing a preternatural flow of saliva, an increased action of the mucous vessels of the trachea, lungs, digestive organs, chylopoietic viscera, and whole intestinal canal. It excites a copious discharge of urine, and in the smallest quantity operates with great certainty on the skin. In its thus extensive influence on the body, it produces a consequently increased action of the absorbent vessels. These may be considered the more ordinary sensible effects of mercury when its action is not particularly modified by the morbid condition of the constitution.

From the very general and stimulant operation of mercury in promoting the *excretions of the whole system* depends its curative action. This theory of the manner in which mercury produces its salutary effects, was suggested in the lectures on the materia medica formerly delivered by the present professor of the theory and practice of physic in

th[illegible]niversity of New-York.* It appears to be deduced from the nature of the changes which this powerful remedy uniformly effects, when its action is not interrupted or changed by adventitious circumstances; and believing it calculated to lead to material improvement in practice, in addition to the facts and reasonings with which it was originally enforced, the writer now offers such others as seem still stronger to confirm its correctness.

It may be asserted as a fact fully confirmed by modern observation and experience, notwithstanding the general opinion of the older writers to the contrary, that the curative operation of mercury, in lues venerea, depends upon the action which it produces throughout the general system: that its sanative powers are in proportion to its uniform effects upon all the secretions, and that the advantages which certain preparations of this mineral possess over those of others, are ascribable chiefly to their action not being confined to the increase of the salivary discharge. In proportion also as the action of mercury is general throughout the system, its tendency to run off by any particular secretion is diminished; and, vice versa, the excitement and consequent increase given to any one secretion almost uniformly produces a diminution of every other.

Admitting these principles to be well founded, it follows that the same salutary effects will not be experienced when the operation of mercury is exclusively directed to the salivary glands, or when it exerts its influence on the intestinal canal alone. Hence, in the administration of this remedy, in lues venerea, in order most effectually to obtain its full operation, it must be introduced into the system in a gradual manner: as it is equally the physician's care to guard

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* Doctor David Hosack.

against an undue augmentation of the salivary discharge, as a preternatural increase of the evacuation by the bowels: for, in the former case, by promoting a salivation, the important functions of the skin and other secretions are lessened or suppressed; and, in the latter case, the remedy is prevented from entering into the general system in proper quantity. That the medical virtues of mercury depend principally upon its operation on the exhalent vessels of the general surface, at the same time that it operates upon the other emunctories of the body, is still farther evinced by the superior benefit which is derived from certain preparations, of this metal which are known to act almost exclusively in producing diaphoresis; as the combinations of it with the marine acid in the form of the corrosive sublimate. Proofs of a like nature may be drawn from the action of those remedies which are often united with mercury, for the more advantageous treatment of the venereal disease, as antimony, guiaicum, sarsaparilla, opium, &c. Again; experience has uniformly shown, that if the action of mercury in causing diaphoresis be aided by a proper regard to temperature, food, and regimen, and such means as operate upon the skin, its salutary effects are greatly increased: and if its operation be prevented or suppressed by irregularities in diet, or from exposure to cold, they are greatly diminished.

This view of the operation of mercury appears still more clear and satisfactory from considering the influence of climate in the removal of lues venerea. How mild and tractable even the most obstinate and confirmed cases of syphilis become upon the patient's removal to a temperate latitude is familiarly known. Not that the air of Montpellier, of Italy, or of Portugal, possesses, in itself, any peculiar balsamic influence, but that the effect of a temperature, such as these places boast, is calculated to insure the full operation of mer-

cury upon all the emunctories of the body, and to prevent its partial influence on any particular part. In temperate climates salivation is at all times studiously guarded against, not less than the pernicious effects which would arise from the inordinate action of the medicine upon the intestinal canal; and if, while in the employment of mercurial remedies, the least symptom of such effects appears, the use of those remedies is immediately suspended. To restore the tonic powers of the system, if impaired, previous to entering upon the use of mercury, and to support them while under its action, are the principal indications of cure; by these means the constitution is enabled to undergo the necessary alteration, mercury exerts its natural operation, the venereal poison is eliminated, and a radical cure is effected. Those disposed to enter more fully into a consideration of the salutary effects of a temperate climate, &c. in aiding the general operation of mercury, as an anti-venereal, will find the opinions of Mr. Hunter,* on this subject, completely overthrown by the facts recorded in Harris,† Don Ulloa,‡ Clark,§ Moseley,‖ Swediaur,¶ and Vage.** Availing himself of a knowledge of the importance of a warm climate in mitigating the severity of venereal affections, the practical physician, as Dr. Swediaur has justly observed, "will be able to put his patient, in any country whatever, in a situation which he finds necessary for curing this complaint." By keeping him in a mild and uniform temperature, by the occasional use of warm bathing, by enjoining the wearing of flannel, and proper

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* Treatise on the Venereal Disease, 4to. p. 548—9.

† Collection of Voyages and Travels, fol. vol. 2. p. 514.

‡ Voyages to South America, vol. 1. p. 280.

§ Diseases of Long Voyages, vol. 2. p. 440.

‖ Treatise on Tropical Diseases, p. 76, 4th ed.

¶ Pract. Observ. on Ven. Complaints, p. 167.

** London Med. and Phys. Journal.

attention to regimen and diet, a substitute not less efficacious than "climate" is obtained, which eminently contributes to the operation of mercury in eradicating the virus of the disease from the system.

It is not at all contended for in this place, that mercury induces a peculiar morbid state of the fluids, such as some of the other authors denominated dissolved, and which a late writer of the same school, Mr. Howard, terms a "putridity sui generis,"* and that in this manner it throws out offensive matter and effects its salutary ends; but inasmuch as it produces a quickened action of the blood vessels, and a consequent increase of all the secretions, it may justly be considered a most powerful alterative; and as it possesses in a special degree the property of exciting the excretory vessels of the skin, intestinal canal, and kidneys, it arrests the progress of that peculiar operation which, it has been maintained, takes place, upon the absorption of a specific matter into the system, and which, as has already been observed, has significantly been termed by several practical writers the assimilating process.

In the treatment of the diseases universally acknowledged to arise from *specific contagion*, mercury has at length become an active constituent in almost all the various articles employed for that purpose, and there is every reason to believe that the evils resulting from such practice have greatly counterbalanced the advantages. But the consideration of one only of the diseases belonging to this class can here be attempted. Notwithstanding all that has been written, so ill defined are the diagnostic signs of *lues venerea*, whether it assumes the form of a local affection, or operates more immediately on the whole system; so various

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* See his Observ. on Ven. Dis. Lond. 1806.

and complicated are its symptoms in its different stages, and so uncertain its course and termination, that there are few complaints which require a more intimate knowledge of their nature in order to effect a radical cure; and it may well be questioned, whether the mal-administration of the remedy has not produced as destructive consequences as the disease itself. The practical observer will recollect how numerous are the diseases arising from causes essentially different from that which gives origin to the venereal, yet, nevertheless, in their characters bearing an exact resemblance to it; that the venereal not unfrequently exists in combination with other disorders; and that from errors in the mode of treatment, not only its nature may become altogether changed, but diseases equally formidable be brought on.

The existence of diseases of the first kind, "wearing the livery" of lues venerea, did not escape the acute penetration of Mr. Hunter; and the subsequent labours of Mr. Abernethy have more fully disclosed their perplexing nature. But as there are no discriminating marks by which they may be distinguished, there is yet no general rule of practice established. The effects of mercury upon them are various. According to Mr. Abernethy, they are sometimes cured by it, sometimes they are only checked, and at other times aggravated.* This, however, is certain, that mercury may be misapplied in the treatment of these anomalous cases; and the practical caution of Mr. Hunter is not to be forgotten; that "it is nearly as dangerous in many constitutions, to give mercury where the disease is not venereal, as to omit it in those which are."† In the diseases of the second kind, it is equally well known, after the removal

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* Surgical Observations, part 2, on diseases resembling Syphilis.

† Treatise on the Ven. Dis. p 381..

of the specific infection for which recourse was had to mercury, that the other symptoms under which the patient may labour are so deceptive, as frequently to be enumerated among the secondary effects of the venereal, and instead of yielding to the power of the same remedy, become more alarming, and if its use be persisted in, terminate fatally. And as far as relates to the cure of the disease, those most conversant with it have furnished sufficient proofs of the pernicious consequences attendant upon errors in its treatment.*

Of these errors the common, and probably the most destructive, is the inducing of profuse salivation, which is generally brought on by throwing into the system large quantities of mercury. To do this in the shortest possible time is the immediate object, and calomel pills, or some other form of mercury, is taken internally, and mercurial unguents or frictions employed. The evident result of such practice cannot fail to be injurious to the constitution. When this discharge is thus excited, it often continues until a total exhaustion of the strength of the patient is the result. In many cases, where it has been thought to have removed the disease, it has proved to be only a temporary cessation of its action; and in other instances, it has converted a comparatively mild disorder into one infinitely more dangerous.

As the venereal arises from the introduction of a specific morbid matter into the system, so the peculiar action of this

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* See the respective publications of Hunter, Bell, Swediaur, and Howard, on the Venereal. Pearson on the effect of various articles in the cure of Lues Venerea. Alley's Observ. on Hydrargyria. Spens' Case of Erythema Mercuriale, Ed. Med. and Surg. Journal, vol. 1. p. 1. M'Mullin on the Erythema Mercuriale, Ed. Med. and Surg. Journal, vol. 2. p. 25. Willan on the Diseases of the Skin, and Mathias on the Mercurial Disease.

matter constitutes the disease. The particular manner in which it produces the various changes from a healthy to a diseased state, in which there exists, in a greater or less degree, an altered and vitiated condition of the fluids, from which source all parts of the body may be affected, is explicable by having recourse to the idea of a ferment, or an *assimilating process*, as most consonant with the phenomena which accompany the operation of the specific matter of lues venerea. The poison of disease is taken up by the absorbents, the local becomes a general affection in a longer or shorter time, according to the virulence of the matter and the susceptibility of the constitution.

Enough, however, has been said to prove that in the treatment of lues venerea such remedies are to be employed as operate more directly in promoting the action of all the secretory vessels of the body, and especially those of the surface; because, as before stated, by this action the morbid process which has taken place will be arrested, and the assimilated matter carried out of the body. Equally opposed, therefore, to the opinion declared by Mr. Bell, that "no advantage is derived from any increase that may be made to any of the secretions,"* and to that of Mr. Howard, who is the advocate for profuse salivation, even in the mildest form of the disease, and who contends, that the greater the discharge the more certain the cure,† the truth lies between them, and the most certain and effectual practice depends upon an increased discharge from the *excretory vessels of the whole system.*

To render plain truths still plainer, and to show, on this subject, more strikingly the incorrectness of Mr. Bell and of

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* Treatise on Gonor. Vir. and Lues Ven. vol. 2. p. 272.

† Observations on the Venereal Disease, vol. 1. p. 297.

Mr. Howard, let it be recollected, that the effect of every preparation of mercury is uniformly evinced by a greater discharge of some of the secretions; and this effect is so constant, that it sometimes takes place from the use of the mineral in a crude state.* In short, as Mr. Hunter remarks, there is no proof of its affecting the constitution without this consequence; and its employment assuredly cannot be followed by any salutary result, unless it operates upon the constitution. But it is useless to dwell on this point, and there are probably few men of observation who will accede to the sentiment expressed by Mr. Bell. The opinion stated by Mr. Howard, of the necessity of profuse salivation in every case, had its advocates at a very early period in the history of this medicine, and though perhaps scarcely any opinion has at different times been more warmly embraced, or more indignantly rejected, it nevertheless at the present day is unfortunately one of the most popular. The older practitioners attempted to justify this absurd and destructive method of treatment, by maintaining that salivation melted down and carried away the serum of the blood which contained all the venom of the venereal disease. At the present time, the practice of exciting salivation seems to owe its general reception to the well-known principle espoused by Mr. Hunter, that no two morbid actions can exist at the same time, and that one irritation destroys another. And yet nothing can be more evident, from Mr. Hunter's writings, than that this very method of cure met in him a decided enemy.

It is of minor consideration to be informed of the causes which have given origin to this mode of treatment; and

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* Mead's Medical Works, vol. 1. p. 106.

painful indeed the recollection of the miseries it has created. No absurdity in medical practice has been the destruction of more lives; none the source of more pain and calamity. Well might Dr. Hoffman pronounce the abuse of this remedy, in the hands of the unskilful, to be more terrible than the sword. Peritiores non sine ratione mercurialia in heroicorum remediorum numerum retulerunt, eo quod ejus indolis ac virtutis sint, ut eorum providus usus valde prodesse, abusus vero validissime nocere possit, *ideoque in manu imperiti tanquam gladius in manu furiosi sint.** The pages of the older writers, as well as those of the modern, fully confirm the fact. Yet this method of cure is still *popular*, still pursued both in private practice and in public institutions.

From the theory which has already been given of the nature and character of lues venerea, the whole system is the seat of the disease, and the indications of cure will accordingly be more readily fulfilled by the employment of those remedies which attack the disorder by their operation on the whole system. Of the various remedies calculated to obtain this end, mercury possesses superior claims, and those preparations of it which more directly act upon the secretory vessels of the surface, for the reasons before mentioned, are to be preferred. A preternatural action of any one of the secretions is not to be depended on, as "it is only a proof of the susceptibility of some parts to such a stimulus,"† and the disease will remain uncured, as is shown from the stationary appearance of local affections.‡ By topical applications, too, local affections may assume the

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* Med. Rational. System. vol. 2. p. 257.

† Hunter on Lues Ven. p. 344. See also Ferriar, Med. Hist. and Reflect. vol. 3. p. 257.

‡ Hunter, p. 341. Saunders on the Liver, 4th ed. Appendix, p. 73.

healthy character, and yet the constitution remain contaminated. Mercury, therefore, to employ the forcible language of Mr. Hunter, must be in a *state of solution in the juices of the body.*

The importance of this method of treatment in confirmed syphilitic cases cannot be too strongly kept in mind; as from a disregard to this principle in the employment of mercurial remedies, are to be traced most of the evils arising from the abuse of mercury; and, perhaps, a majority of the instances of failure in effecting the permanent removal of syphilis, are to be attributed to the same cause. Were the gums alone the seat of the venereal virus, the reasoning of those who contend for the exclusive action of mercury on the salivary glands might be admitted as satisfactory. Few, however, if any, have been the abettors of so absurd an hypothesis, though it affords the only possible ground upon which they can attempt to justify their loathsome and pernicious practice. Wiseman, in his Treatise on the Lues Venerea, has ably exposed some of the principal errors in the management of syphilis, committed by the practitioners of his time;* and more lately, Dease, in his Observations, has placed in a striking light the pernicious effects of the "hot salivating method of cure." The following paragraph, from the pen of Mr. Dease, happily describes the plan of treatment formerly much pursued It probably has been the lot of the reader to witness a similar practice, not unfrequently followed at the present day, and, singular as it may seem, still recommended with all the weight of professorial authority. "In a confirmed syphilis," says Mr. D. "the hot salivating method of treatment was adopted; the patient was crammed

* Chirurgical Treatises: viii. on Lues Ven. vol. 2.

into a narrow room, heated with a stove if it could be procured, the admittance of any fresh air was shut out by blankets put up to the door and windows, and a screen surrounded the patient. There he sat, half suffocated in his own hot, putrid atmosphere, and was rubbed with mercurial ointment until his tongue generally lolled out; the inside of his mouth was covered over with sloughs." "In this hideous pickle," continues Mr. D. "he was to lie for twenty-five or thirty days."* That numerous were the victims to this empirical plan of cure will not excite surprise.

If the view which has been taken of the nature and seat of the venereal disease be well founded, and the circumstances which modify its character and method of treatment be correctly stated, much also depends upon a judicious choice of the different mercurial preparations. Those combinations of mercury must possess a decided advantage which are least calculated to excite the salivary discharge, and whose operation is general throughout the system. Of the various preparations of this mineral, now in most general use, the oxygenated muriate of mercury, or, as it is commonly called, the corrosive sublimate, (the *oxymurias hydrargyri*, L. P. *murias hydrargyri*, E. P. *murias hydrargyri corrosivum*, D. P.) is particularly recommended for this purpose. This form of mercury, like every other, has had many opponents and adherents. It is thought by some to have been first employed as an anti-venereal by Basil Valentine;† but, upon the authority of the celebrated Van Swieten, it came into general use only in 1754, and the favourable reports of its efficacy "would fill," says Mr. Pear-

* Observ. on the different methods of treating the Ven. Dis. Dublin, 1779.

† Pearson on the Effects of Various Articles, &c. p. 100.

son, "a volume of considerable magnitude." In the number of its most decided advocates may be found the distinguished names of Locher, De Haen, Pringle, Cleghorn, Gorden, Russell, Stoll, Lewis, Dease, and Selle.

Among the principal advantages which the corrosive sublimate possesses over that of every other preparation of mercury are, that, judiciously administered, it is particularly mild and safe in its operation, will admit of a more extensive use in all the various forms of lues venerea, and subject the patient to fewer inconveniences: that it readily enters into the general circulation, becomes miscible with the several fluids of the body, the soonest arrests the progress of the complaint, and eliminates the morbid matter through those emunctories best calculated for that purpose: that it supersedes the necessity of salivation, by its action on all the secretions, and by promoting especially the cuticular discharges, and the evacuations from the kidneys: that it is the only preparation to be depended on in those peculiar habits of body so susceptible to become salivated by every other form of mercury now in use: that in its ultimate effects upon the constitution, it is attended with comparatively no injury. These facts are indeed truly important, and many of them are granted by those who altogether reject the use of this preparation.

It is not a little unfortunate for the advocates of other combinations of mercury, that the objections which have been brought against the corrosive sublimate are so dissimilar. It has been assigned as a reason against the preparation itself, that it has failed of its salutary effects by being given in too small doses. By some its anti-venereal properties are said to be lost on account of its too readily exciting the cuticular discharge; by others it is owing to its defective action on the secretions of the skin and mouth. By

some it is admitted to be beneficial in the primary stage of the disease, and by others it is contended that it is calculated to remove only secondary symptoms. It is also declared that it is violent and uncertain in its operation, and that it does not render the cure permanent.* Some of these objections are, indeed, weighty, and, were they well founded, would fully justify the abandonment of this peculiar combination of mercury; but if the least reliance is to be placed upon the experience and observation of those who have employed the corrosive sublimate with the most disinterested and honourable views, and solely to determine upon its anti-venereal powers, evidence sufficient to prove the fallacy of these objections, and derived from indubitable sources, might be adduced. The testimony of Dr. Locher, of the Vienna hospital, is so full and explicit, that it were an omission not to insert it. Having witnessed the "horrid calamities" arising from salivation and other abuses which existed in that institution in the management of venereal patients, upon the recommendation of Van Swieten, he made trial of the corrosive sublimate. From the year 1754 to 1762, he cured by it no less than four thousand eight hundred and eighty persons, *without inducing salivation;* and testifies, that "no persons died, or experienced the least painful and dangerous symptoms, in consequence of this remedy."† In the cases in which the same preparation was recommended by Pringle,‡ the cures that were effected were permanent, and from the repeated experience of many other distinguished practitioners, the same result ensued. Multa nobis ex-

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* Hunter, Howard, Pearson, Mathias, and others.

† Locher's Observat. Pract. as quoted by Van Swieten, Commentaries, vol. 17. p. 294.

‡ Gorden, Lond. Med. Obs. and Inq. vol. 1. p. 365. vol. 2. p. 73.

empla visa sint luis venereæ, murcurio sublimato corrosivo perfectè sanatæ.*

To enter into a consideration of the treatment of the various symptoms which characterize lues venerea in its simple and in its more confirmed state, is not deemed necessary, nor will it here be attempted. Fully convinced, as the writer is, of the decided advantages which the corrosive sublimate, as an anti-venereal remedy, possesses, in most cases, over other mercurial preparations, he cannot forbear adding a few further observations for the purpose of recommending to more general use this combination of mercury.

A very forcible reason why a preference ought to be given to the corrosive sublimate as an anti-venereal remedy, is the mildness of its operation when compared with most other mercurial preparations. In the mind of the judicious practitioner, there need exist no apprehensions of the severity of its action; few articles of the materia medica can be more readily accommodated to the peculiar condition of the patient and the nature and stage of the disease. The evidence of its mildness may be adduced from the salutary effects which it produces in the constitution of delicate children, and even of infants. In not a single instance, within the recollection of Dr. Hosack, has it ever been followed by pernicious consequences, though long employed by him in many cases in which the patient laboured under some hereditary taint, obstinate cutaneous eruption, or other symptoms indicating an alterative course of remedies. The destructive effects which have been mentioned as attending its administration, such as excessive pain and irritation of the stomach and bowels, headach, fever, &c. may, in cer-

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* Ratio Medendi, pars secunda, p. 229. See also Medica Clinica, by Christian Gottlieb Selle. Berlin, 1802.

tain cases, arise from some peculiarity of constitution obnoxious to mercurial remedies, but are doubtless, in general, to be attributed either to the improper preparation of the corrosive sublimate, or to its having been given in undue quantity. It has been asserted that this mercurial salt is particularly injurious to those labouring under pulmonary affections. That this objection is ideal, or rather that, of all mercurial preparations, it applies with least force against the corrosive sublimate, must be evident upon considering the general operation of this form of mercury. Every combination of this mineral may prove more or less injurious in the forming stage of consumption, on account of the active inflammation which is then present, and the additional irritation attendant upon mercurial action. For it may be laid down as a general principle, that mercury is in itself injurious when administered to any considerable extent during the existence of inflammation and febrile excitement, and before the employment of blood letting or other evacuants.

From the mild operation of the corrosive sublimate, properly prepared, may be inferred the utility of its employment in persons of delicate habit, and in those cases especially where the constitution is materially impaired. In cases of this kind its exhibition is followed with the best effects. That the tonic powers of the system may, however, in certain instances, be so far weakened as to render the employment of every form of mercury not only inefficacious in the removal of syphilitic complaints, but productive of the most distressing symptoms, and, consequently, that the use of the oxygenated muriate will at times be the cause of much inconvenience and real suffering, there is left no room to doubt. In irregular cases of this nature, the remedy necessarily fails of producing its ordinary beneficial effects; and as it becomes an additional source of irritation,

it greatly increases the debility which already prevails. These effects, as has just been remarked, do not result from the exclusive employment of any particular form of mercury; they seem to arise less frequently from the corrosive sublimate, but are common to all mercurial preparations. For if the constitution has not the power to support the action of mercury, vain is the attempt to eliminate from the system the virus of lues venerea. Hence, in the treatment of certain diseases of hot climates, especially in unhealthy situations, it is not an uncommon practice to administer the bark daily during the whole course, for the purpose of enabling the constitution to bear a sufficient quantity of mercury to subdue the complaint.* Upon the same principle that learned physician and distinguished writer, Dr. Chisholm, maintains, that in the management of disease a reduction of plethora at the commencement, and the augmentation of the vis vitæ in the advancement, are to be particularly attended to, in order to ensure the successful administration of mercury.† Dr. Ferriar has observed instances in which the venereal disease itself assumed a peculiar character owing to debility; where the debility so far prevailed that the constitution had not power to form a genuine syphilis. When this happens, mercury will not effect a cure. "Under these circumstances," adds Dr. Ferriar, "I have advised with success a course of tonics without mercury, to raise up the constitution to a higher level. Mercury may then be expected to cure."‡

It was deemed proper to make these few remarks on the condition of the system necessary to ensure the successful operation of mercury, not only from the circumstance of its

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* *Vide* Clark on the Diseases of Long Voyages.

† Essay on the Malignant Pestilential Fever, vol. 1.

‡ Med. Hist. and Reflect. vol. 3. p. 253.

being too generally overlooked, but because it strengthens the belief that the pernicious effects which have been so hastily attributed to the corrosive sublimate, might have been more satisfactorily accounted for by adverting rather to the debilitated state of the constitution than to the acrid nature of the preparation itself.

Difficult as it is to establish any diagnostic signs by which the depredations of *Venus* and of *Mercury* on the human constitution may be accurately distinguished, enough is known concerning the nature of mercurial affections to lead to the abandonment of that indiscriminate recourse to the external application of this mineral, which has now become so general. Mr. John Pearson states that the mercurial eczema, or erythema, as it is also called, may arise after the employment by friction of a single drachm of mercurial ointment, and after the internal use of a dose of calomel: and were it necessary to say any thing in corroboration of this fact, the writer might detail the particulars of a case of vesicular eruption that lately came under his notice, which occurred in an adult patient to whom had been administered eight grains of calomel. The vesicles first appeared, and were confined, chiefly about the anterior and superior part of the chest and on the chin; they were of the size of an ordinary split pea, of a pale or rather light gray colour, unaccompanied with inflammation or fever, and strongly resembled the eruption described by Dr. Willan, in his fourth order of Cutaneous Diseases.* The serous fluid they contained was discharged on the second or third day, and the excoriated surface readily healed. But notwithstanding that the internal as well as external use of mercury, even in small quantity, will, in certain habits, give origin to the mercurial ery-

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* *Vide* Cutan. Diseases; order Bullæ, III. Genus, sp. i.

thema, yet a careful examination of what has been written on the subject seems to warrant the conclusion that this form of disease arises, in a great majority of instances, from mercury externally applied. If this opinion be well founded, it presents strong additional arguments in favour of the internal use of the corrosive sublimate as an anti-venereal remedy.

That the corrosive sublimate, of all mercurial preparations, soonest affects the system and arrests the action of the venereal virus, is a truth grounded upon the concurring experience of the most distinguished practitioners.

It is but proper to state, that the preparation of mercury now recommended, has been employed for the last twenty years in the private practice of Doctor Hosack, and during his attendance at the New-York State Prison, New-York Hospital, and the Alms-house of this city, as physician of those institutions. It has invariably been found to be the remedy best calculated for the removal of lues venerea, both in its primary and secondary stages; and not a single case is recollected in which the cure has not been permanent. Those injurious effects upon the stomach and bowels, which are so much apprehended, were avoided by a cautious employment of the medicine, and by a due consideration of the peculiarities in the constitution and state of the patient. From this form of mercury, salivation scarcely ever was induced; and while under its influence, the employment of the decoct. guaiac. et sarsaparil. was found to be an excellent auxiliary in recent cases; and in the secondary stage of the disease, where the patient had been neglected, or when improprieties in the cure had been committed, it was almost indispensable.

Though satisfied that the oxymuriate of mercury possessed full claims to the title of a powerful anti venereal remedy, from a perusal of the testimony published in its favour, and from a personal knowledge of the result of several cases in

which it had been employed; with the view of more fully determining so important a matter, and to ascertain, as far as practicable, whether the objections which have been stated against it, particularly those of the distinguished Mr. John Pearson, were founded in reality, at the suggestion of the writer, the use of the corrosive muriate of mercury was adopted in the spring of the year 1811, in the New-York Hospital, by Dr. John C. Cheesman, the then house surgeon. From the extensive charity which this excellent institution afforded, there was abundant opportunity of seeing almost every form of this disease, from the more mild to the most aggravated; cases of recent infection and those of long standing. After a careful examination of the histories of a great variety of cases, a selection was made of several of those patients who were affected with the primary, and of others labouring under the secondary stages of this disease. The corrosive sublimate was given in some instances in the form of the spirituous solution, and in other instances made into pills; the decoction of guaiacum and sarsaparilla was employed as an auxiliary, and occasional recourse was had to the application of the lunar caustic; but the external use of every preparation of mercury was omitted. In no one instance were unpleasant effects produced by the action of this mercurial salt; and, contrary to the opinion entertained by Mr. Pearson, of the efficacy of this remedy, the result of these several cases was attended with complete success.

To multiply further arguments, or offer additional proofs in favour of the oxygenated muriate of mercury does not seem necessary. It may be confidently pronounced a safe, convenient, and efficacious remedy in lues venerea. How far a too ready acquiescence in the force of authority may be assigned as the cause of that want of confidence in the virtues of the corrosive sublimate, and of that appre-

hension of its pernicious qualities which at present prevail among many practitioners, it is impossible to ascertain. It is evident that the opinions of Mr. Pearson are those chiefly which have been adopted and reiterated by every subsequent writer who has opposed the use of this mercurial combination. But the success attendant upon the administration of the oxymuriate of mercury furnishes the most satisfactory answer that can be given to those who have denied its efficacy. Upon the successful result of the cases of lues venerea which existed in the New-York Hospital in 1811, the corrosive sublimate again became the principal anti-venereal remedy in that extensive establishment. This form of mercury since that period, has also been in general use in the New-York Alms-house, in the treatment of syphilis in its different stages; and in most instances it is now employed for the same purpose by the physicians of the City Dispensary. The observation and experience of the writer during the last three years, in a number of unequivocal cases of lues venerea, have tended to corroborate the favourable opinion he formerly expressed,* and induce him to recommend with increased confidence a more extended application of this preparation of mercury.

Various are the forms in which the corrosive sublimate has been used in the different stages of lues venerea, and in other disorders indicating an alterative course of remedies. Its external application, in the form of ointment, has been recommended by some; but against this practice many

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* *Vide* An Inaugural Dissertation on Mercury: embracing its Medical History, Curative ction, and Abuse in Certain Diseases. *New-York*, 1811. The present communication, and a former one on the same subject, which appeared in the Register for April 1813, may be considered as constituting the collegiate exercise just mentioned, though now in some parts enlarged and perhaps somewhat improved.

forcible objections might be brought. The internal use of the spirituous solution of Turner, in which the proportion of ardent spirits to the mercurial salt was remarkably small, has justly been accused as the source of much mischief. The formula of Van Swieten deserves a decided preference; for the muriated quicksilver dissolved in spirits and exhibited in doses limited to the quantity of one eighth of a grain, two, or, at most, three times in twenty-four hours, seldom produces the least nausea, or any derangement of the stomach or bowels.

The corrosive sublimate, dissolved in common brandy, in the proportion of two grains of the salt to one ounce of the liquid, is a valuable and convenient preparation for delicate children. It may be given with the greatest safety, in a little sweetened water, to the amount of three or four drops to a child of one year, and repeated three times a day; and to a child of two or three years old six or eight drops three times a day. After its employment two or three days the dose may be increased to ten or twelve drops.

A solution of the oxymuriate of mercury in common distilled water, with the addition of a little muriated ammonia, (sal ammoniac,) is also a judicious and safe pharmaceutical combination.

But the best form of administering the corrosive sublimate is that in which this mercurial salt, united by solution with the muriate of ammonia, is made into a mass with the crumb of wheat bread, and then divided into pills.

℞. Oxymuriat. Hydrarg.
Muriat. Ammon. aa gr. xv.
Aq. distillat. vel. font. ʒiss. Solutioni addatur
Panis medul. sic. q. s.
Ut fiat massa, in pil. cxx. dividenda.

Every pill in this prescription contains, if the materials be uniformly combined, the eighth of a grain of the corrosive sublimate. The dose can therefore easily be regulated with the greatest accuracy. Of these pills one is to be taken every night and morning, though, in some aggravated cases, another pill may be taken at the middle of the day with additional advantage. In this manner a quarter of a grain of this preparation of mercury will, in ordinary cases, be taken in twenty-four hours; and in the more severe form of lues venerea the additional eighth of a grain. Instances may occur in which it may be advisable to administer half a grain daily. Mr. Bell has given a grain of the corrosive sublimate divided in four or five doses, but has not been able to continue this quantity for more than two or three days together.

The corrosive sublimate to the amount of one quarter of a grain a day, and, in some cases, an additional eighth of a grain, in pills, may be continued for a long time without producing the least inconvenience in the stomach and bowels, and with greater certainty and more beneficial effect than the same quantity of this salt in the form of the spirituous solution. The use of the corrosive sublimate ought to be continued two or three weeks after the disappearance of the disease, in order more effectually to accomplish a radical cure.

It has already been observed, that the oxygenated muriate of mercury operates more readily on the constitution than any other form of this mineral, and that even in very small quantity it soonest arrests the progress of venereal symptoms, and, by its general action, eliminates the poison of the disease. It deserves to be stated that during the use of this preparation, all those precautionary measures with regard to diet and regimen, which are generally recommended by writers, need not be regarded with the same scrupulous

attention, while in the use of the corrosive sublimate, as during the employment of other mercurial medicines. For as the corrosive sublimate rarely affects, to any considerable degree, the salivary glands, those subjected to its use are not rendered so susceptible to the influence of cold, and the physician is seldom under the necessity of devising means for the purpose of obviating the pernicious consequences of salivation. Instances of peculiarity of constitution may occur which require much management and discretion in the use of this remedy. Mr. Bell has observed, that opiates have not the same influence in preventing an undue action of the oxymuriate of mercury upon the stomach and intestinal canal which they commonly have with other mercurial preparations.* The limited experience of the writer has not in any case corroborated this opinion: on the contrary, he has found an occasional recourse to small quantities of opium highly serviceable.

As some one or more articles of the vegetable kingdom are in general employed in those cases in which the corrosive sublimate is administered, it perhaps would not be irrelevant to examine how far they are entitled to particular confidence. It may be proper to remark, that of the many substances which have been employed as auxiliary remedies, or are now in use, the *lignum guaiaci* and the *radix sarsaparillæ* unquestionably claim the first notice. They are acknowledged to be useful during the administration of the oxymuriate of mercury, in cases of recent affection; and in the secondary symptoms of the disease, for the removal of the evils which have taken place from the injudicious employment of mercury, &c. their salutary operation has been uniformly evinced.

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* Treatise on Gonor. and Lues Ven. vol. 2. p. 248.

The compound decoction of guaiacum and sarsaparilla may readily be prepared in the following manner:

℞. Rasur. ligni guaiac.
Rad. sarsapar. fissæ aa. ℥i.
Coq. in aq. font lbiij. ad lbij.

Of this decoction the above quantity, taken warm, ought to be drunk within the twenty-four hours. Of its effects as a powerful alterative for the removal of some of the most painful symptoms of lues venerea and obstinate cutaneous affections, indubitable evidence exists in the pages of the old and in those of the most eminent modern authors.* During a period of more than forty-five years its virtues for these purposes have been tested in the practice of that learned and distinguished physician, Dr. Samuel Bard, and for more than twenty years in the practice of Dr. David Hosack. Its salutary properties appear to be owing chiefly to the general excitement which it produces and to its action as a diaphoretic. When had recourse to, while in the use of mercury, particularly in the treatment of those cases where the disease is of long continuance, it proves eminently useful by promoting the natural tendency which the corrosive sublimate possesses to increase the cuticular discharge.

The compound decoction of the guaiacum may be taken with success for the removal of many of the morbid effects produced by the improper employment of the different preparations of mercury, and for restoring the constitution to its wonted vigour. The advantages arising from the use of the *Rob Anti-syphilitique*,† for which so enormous a consi-

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* *Vide* Aphrodisiacus, Ed. Boerhaavii. Also, Hunter, Bell, &c.

† *Vide* M'Neven's Account of the Rob of Laffaeteur, in New-York Med. and Phil. Journal, vol. 3. p. 26.

deration is demanded, may with confidence be attributed principally to the sarsaparilla which enters into its composition.

As the local effects which arise from the venereal virus depend upon constitutional irritation, or the action of lues venerea upon the constitution, these effects in most cases are to be permanently removed by those remedies only which operate through the medium of the whole system. But the consideration of the local applications best calculated as efficient auxiliaries for the removal of these consequences is at present purposely omitted.

JOHN W. FRANCIS.

VI.

Case of Hydatids in the Uterus. By Dr. Jonathan Eights, *Albany.*

About the 20th of April last, I was requested to visit Mrs. C——, when she gave me the following account of her situation and complaints. She is about twenty-eight years of age, has been the mother of three living children, and has had two abortions, of which one was at the period of three months, and the other about seven months after conception. During the months of June and July, 1813, she experienced a severe attack of fever, of which she perfectly recovered by the first of August, at which time she supposed herself pregnant, and during the first four months, experienced the usual symptoms, such as nausea and vomiting, faintings, (to which she had been subject in former pregnancies,) a swelling of the breasts, and a gradual enlargement of the abdomen. When about six months advanced, she became alarmed at her condition, not having discovered any motion of the fœtus,

and experiencing also a heaviness and bearing down in the lower part of the abdomen. In this situation she continued until the ensuing April, except that the heaviness increased and her health evidently declined. About the middle of this month she was seized with a discharge from the vagina of a bloody matter, which was evacuated with a sudden gush. These discharges occurred every day, and, at last, became so frequent, that she was seldom free from them. She had no pain except in the right side, and this was most severe at the period of the discharges. On examining the patient externally, I could not discover any inequalities or hardness in the abdomen, but a uniform surface, with the bulk of a woman when about seven months advanced in pregnancy. On examination, *per vaginam*, the uterus was found low down in the pelvis, and the os tincæ so far opened as to admit the tip of the fore finger. The uterus, which appeared to be filled with some soft substance, was completely distended. Mrs. C—— was at this time troubled with a violent cough and night sweats, and complained of a loss of appetite, and a great degree of thirst, although the quantity of urine evacuated was not less than usual. Her countenance was sunk and her spirits greatly depressed. I endeavoured to convince her of the necessity of not permitting herself to be thus affected, and flattered her with the hopes of a favourable termination, intimating at the same time my suspicion that the uterus contained hydatids.

In order to relieve the cough, I administered the common pectoral mixture, and to restore her appetite and restrain the night sweat, I gave the sulph. acid. dilut.: by the use of these remedies, these symptoms were relieved. I then ordered the tinct. mur. ferr. gtt. xij. ter in die. This medicine was persisted in until the 12th of May, at which period I was again requested to visit her. She then informed me that the watery discharges had ceased for some time, but that she

had discharged during the day some small clots of blood; that she had regular pains, with much bearing down, and these increased in frequency, and that she felt much as in former labours, except that the pains were more rending: her abdomen had somewhat increased in bulk and hardness. On examination, I found the os uteri dilating, and ascertained that the substance in the uterus was soft and very tender, the finger meeting with little resistance.

In the evening I again saw her; the pains had become more severe, and, on introducing my hand, I found the os uteri much dilated, and it met the contents of the uterus, which, in endeavouring to bring away, broke, and on examination I found the part thus discharged to be hydatids, attached to some pulp like albumen. The pains continuing, she discharged about a gallon of hydatids, differing from the largeness of a pullet's egg to the size of a pea. After the discharge, she felt free from pain; there was little or no evacuation from the uterus, but about the third day she became uneasy and feverish, and shortly after had a copious secretion of milk. She is now recovering (June) as well as any woman who has been confined in child-birth. Her countenance, which was considerably distorted, has become natural, her abdomen is completely reduced to its natural size, and her appetite is returning. I have directed her to continue the use of the tinct. mur. ferr. both as a tonic and to destroy any remains of hydatids; being firmly convinced that this medicine has been the principal means of destroying these singular animals.

July 28. The patient is now in perfect health.

REVIEW.

ART. I. COLLECTIONS *of the* NEW-YORK HISTORICAL SOCIETY, *for the year* 1814. *Volume second.* New-York. Van Winkle and Wiley. 8vo. pp. 358.

CATALOGUE *of the Books, Tracts, Newspapers, Maps, Charts, Views, Portraits, and Manuscripts, in the Library of the* NEW-YORK HISTORICAL SOCIETY. New-York, 8vo. pp. 139.

THE appearance of a second volume of these Collections so shortly after the publication of the first,* speaks favourably of the progressive condition of the New-York Historical Society. That it is proceeding according to the original design of its founders, and fulfilling the high expectations of its friends, are evident upon a view of the contents of the volumes with which they have already favoured the public. To collect and preserve whatever documents relate to the natural, civil, literary, medical, and ecclesiastical history of the United States, and particularly of the state of New-York, is their principal object: collateral topics of inferior consideration are not however disregarded. It has before been stated that the New-York Historical Society was encouraged to this undertaking by the laudable and successful efforts of Belknap, Eliot, Minot, Sullivan, Thacher, and the other distinguished projectors of a similar institution in Massachusetts. Long may these associations continue emulous of that renown which is sure

* See Register, vol. 2. p. 427.

to attend the cultivation of the best interests of science and literature.

The prefatory matter of the volume now before us contains some particulars concerning the present state of the association, a list of the honorary and resident members, and the interesting *memorial*, from the pen of the Hon. De Witt Clinton, drawn up in behalf of the society, and presented to the legislature in the winter of 1813-14. It is gratifying to add, that this able and manly appeal to the liberality of that enlightened body was not made in vain: for promoting the important objects of the society the munificent grant of twelve thousand dollars has been appropriated at the last session of the state legislature. We shall briefly notice the separate papers which compose the body of the work.

A Discourse on the Benefits of Civil History, delivered before the New-York Historical Society, Dec. 6, 1810. *By Hugh Williamson*, M. D. LL. D. &c.

Dr. Williamson, who is familiarly known as the historian of North Carolina, takes, in the present discourse, a short but interesting view of the principal circumstances which formerly caused so small a share of attention to be paid to the cultivation of historical knowledge: having noticed the general neglect among ancient nations to preserve authentic records of their events, and the consequent uncertainty and incorrectness with which the occurrences of former times are related, even by the best ancient writers, he dwells upon the pleasure and advantages which arise from the study of civil history, and points out its importance as a mean of promoting human happiness. We bear willing testimony to the excellence of Dr. Williamson's Discourse; it is evidently the result of much reading and reflection: the concluding

paragraph, which is all that our limits will permit us to transcribe, contains suggestions which it is hoped have not been made in vain.

" The more cause we have to lament the general defects in ancient history, and the more cause we have to complain that there is hardly a country on the face of the earth whose original settlement and consequent progress can be discovered, the more industrious this society should be to preserve a small section of the globe, or the settlement and progress of a small colony from the great tomb of oblivion. It is not only our duty to have it faithfully recorded, how this part of the world was settled by civilized men, but also to show in what manner, and by what means, the inhabitants increased in useful knowledge and virtue; for it is not to be questioned, that a great proportion of the first settlers had but a small share of learning; and some of their chief officers were very deficient in virtue. Posterity will take little interest in knowing that the inhabitants may have doubled their number in twenty years; but they may be desirous to know by what means the subjects had obtained such a degree of information, toward the end of the eighteenth century, as to understand the principles of civil liberty, and contend successfully for their rights. Posterity will expect to be informed, and it will be your duty faithfully to record, what steps were taken in this eventful epoch, about the beginning of the nineteenth century, to promote virtue and the general stock of knowledge among the people. It was observed by a great philanthropist, that fewer criminals are incarcerated in Scotland or in Switzerland than in any other part of Europe. The reason he assigns for this difference is, that the common people in Scotland and Switzerland are more generally instructed than in any other part of the civilized world. They are more generally taught to read, and are taught the principles of the christian religion, the foundation of good morals. His reasoning on this subject was doubtless correct. For ignorance is the fruitful parent of vice; and the man who knows his duty is most likely to attend to it. In this critical period, it will therefore

be the duty of government to multiply the means of instruction; it will be their duty to see that every citizen is taught to read, at whatever expense that may be done; and you will take a pleasure, for the benefit of posterity, in recording the fact. Posterity may be desirous to know, and it will be your duty to record, whether men in public trust, instructed as they are by ancient history, and by the recent fate of European republics, had been careful to check the dangerous progress of internal faction; to preserve peace; to cultivate harmony among their fellow citizens, and to retain the confidence and affection of the sister republics."

A Discourse, delivered before the New-York Historical Society, on the 6th December, 1811. *By the Hon. De Witt Clinton, one of the Vice Presidents of the Society.*

"As it is not uninteresting, and is entirely suitable to this occasion," observes Mr. Clinton, "I shall present a general, geographical, political, and historical view of the red men who inhabited this state before us; and this I do the more willingly, from a conviction that no part of America contained a people which will furnish more interesting information, and more useful instruction; which will display the energies of the human character in a more conspicuous manner, whether in light or in shade, in the exhibition of great virtues and talents, or of great vices and defects."

A subject so replete with pleasure and instruction, as a faithful account of the aborigines of this state unquestionably is, must naturally excite the highest expectations when treated of by one possessed of the acknowledged abilities of the author of this Discourse. We have accordingly read with no ordinary satisfaction the present production of Mr. Clinton, and rejoice to find committed to so able a pen the depicting the character of a people,

in every respect the most remarkable of the savage tribes of North America. A better and more effectual means of refuting the unjust and illiberal aspersions of Raynal, Buffon, Robertson, and others on the aborigines of this country, could not have been resorted to, than the one chosen on the present occasion.

Than the Confederates,* no people of whom we read have been more eloquent in debate, or more daring in the field; and had fame been just to their memory, their reputation would have rivalled that of the heroes of Greece and Rome.

> Vixêre fortes ante Agamemnona
> Multi: sed omnes illacrymabiles
> Urgentur ignotique longâ
> Nocte, carent quia vate sacro.
>
> HORACE.

Mr. Clinton has furnished many interesting and circumstantial details concerning the territorial limits of this extraordinary people; their habits, manners, domestic economy, &c. &c. but for which the reader must be referred to the discourse itself. We cannot, however, forego the present opportunity of enriching the pages of the Register with the following extracts.

"The Confederates," says Mr. Clinton, "had proceeded far beyond the first element of all associations, that of combination into families; they had their villages, their tribes, their nations, and their confederacy; but they had not advanced beyond the first stage of government. They were destitute of an executive

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* The Confederates were also denominated, by the English, the Five Nations, the Six Nations; by the French, the Iroquois; by the Dutch, the Maquas, or Mahakuase; by the Southern Indians, the Massawomacs; by themselves, the Mingoes, or Mingoians, and sometimes the Aganuschion, or United People; their confederacy they styled the Kenunctioni.—*See the Discourse, p.* 44.

and judiciary to execute the determinations of their councils; and their government was therefore merely advisory, and without a coercive principle. The respect which was paid to their chiefs, and the general odium that attached to disobedience, rendered the decisions of their legislatures, for a long series of time, of as much validity as if they had been enforced by an executive arm.

"They were originally divided into five nations, the Mohawks, the Oneidas, the Onondagas, the Cayugas, and the Senekas. In 1712, the Tuscaroras, who lived on the back parts of North Carolina, and who had formed a deep and general conspiracy to exterminate the whites, were driven from their country, were adopted by the Iroquois as a sixth nation, and lived on lands between the Oneidas and Onondagas, assigned to them by the former.*

"The Mohawks had four towns and one small village, situated on or near the fertile banks of the river of that name. The position of the first was at the confluence of the Schoharie Creek and Mohawk River, and the others were farther to the west. This nation, from their propinquity to the settlements of the whites, from their martial renown and military spirit, have, like Holland, frequently given their name to the whole confederacy, which is often denominated the Mohawks in the annals of those days; and it may be found employed in the pages of a celebrated periodical writer of Great Britian, for the purpose of the most exquisite humour.† This nation was always held in the greatest veneration by its associates. At the important treaty of 1768, at Fort Stanwix, by Sir William Johnson, they were declared by the other nations "the true old heads of the confederacy."‡ The Oneidas had their principal seat on the south of the Oneida Lake, the Onondagas near the Onondaga, and the Cayugas near

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* Smith's New-York, p. 46. Douglas' Summary, p. 243.

† Spectator.

‡ The proceedings of this treaty were never published. I have seen them in manuscript, in the possession of the late Vice President Clinton.

the Cayuga Lake. The principal village of the Senekas was near the Genessee River, about twenty miles from Irondequoit Bay. Each nation was divided into three tribes; the Tortoise, the Bear, and the Wolf; and each village was, like the cities of the United Netherlands, a distinct republic, and its concerns were managed by its particular chiefs.* Their exterior relations, general interests, and national affairs, were conducted and superintended by a great council, assembled annually in Onondaga, the central canton, composed of the chiefs of each republic; and eighty sachems were frequently convened at this national assembly. It took cognizance of the great questions of war and peace; of the affairs of the tributary nations, and of their negotiations with the French and English colonies. All their proceedings were conducted with great deliberation, and were distinguished for order, decorum, and solemnity. In eloquence, in dignity, and in all the characteristics of profound policy, they surpassed an assembly of feudal barons, and were perhaps not far inferior to the great Amphyctionic Council of Greece. Dr. Robertson, who has evinced, in almost every instance, a strong propensity to degrade America below its just rank in the scale of creation, was compelled to qualify the generality of his censures in relation to its political institutions, by saying, "If we except the celebrated league which united the Five Nations in Canada into a federal republic, we can discern few such traces of political wisdom among the rude American tribes as discover any great degree of foresight or extent of intellectual abilities."†

"A distinguished feature in the character of the confederates, was an exalted spirit of liberty, which revolted with equal indignation at domestic or foreign control. "We are born free, (said Garangula in his admirable speech to the governor general of Canada,) we neither depend on Ononthio, or Corlear," on France, or on England. Baron Lahontan, who openly avowed his utter detestation and abhorrence of them, is candid enough to

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* See Charlevoix, Colden, &c.

† Robertson's America, vol. 1. p. 435.

acknowledge, that "they laugh at the menaces of kings and governors, for they have no idea of dependence; nay, the very word is to them insupportable. They look upon themselves as sovereigns, accountable to none but God alone, whom they call the Great Spirit." They admitted of no hereditary distinctions. The office of sachem was the reward of personal merit, of great wisdom, or commanding eloquence; of distinguished services in the cabinet or in the field. It was conferred by silent and general consent, as the spontaneous tribute due to eminent worth; and it could only be maintained by the steady and faithful cultivation of the virtues and accomplishments which procured it. No personal slavery was permitted:* their captives were either killed or adopted as a portion of the nation. The children of the chiefs were encouraged to emulate the virtues of their sires, and were frequently elevated to the dignities occupied by their progenitors. From this source has risen an important error with respect to the establishment of privileged orders among the confederates.

There is a striking similitude between the Romans and the Confederates, not only in their martial spirit and rage for conquest, but in their treatment of the conquered. Like the Romans, they not only adopted individuals, but incorporated the remnant of their vanquished enemies into their nation, by which they continually recruited their population, exhausted by endless and wasting wars, and were enabled to continue their career of victory and desolation: if their unhappy victims hesitated or refused, they were compelled to accept of the honour of adoption. The Hurons of the Island of Orleans, in 1656, knowing no other way to save themselves from destruction, solicited admission into the canton of the Mohawks, and were accepted; but, at the instance of the French, they declined their own proposal. On this occasion the Mohawks continued their ravages, and compelled acquiescence: they sent thirty of their warriors to Quebec, who took them away, with the consent of the governor general; he, in

* Colden, vol. 1. p. 11.

fact, not daring to refuse, after having addressed him in the following terms of bold defiance; which cannot but bring to our recollection similar instances of Roman spirit, when Rome was free.* "Lift up thy arm Ononthio, and allow thy children, whom thou holdest pressed to thy bosom, to depart; for if they are guilty of any imprudence, have reason to dread, lest in coming to chastise them, my blows fall on thy head." Like the Romans, also, they treated their vassal nations with extreme rigour. If there were any delay in the render of the annual tribute, military execution followed, and the wretched delinquents frequently took refuge in the houses of the English to escape from destruction. On all public occasions they took care to demonstrate their superiority and dominion, and at all times they called their vassals to an awful account, if guilty of violating the injunctions of the great council. At a treaty held on the forks of the Delaware, in 1758, by the governors of Pennsylvania and New Jersey, with the Six Nations, several claims of the Munseys, Wapings, and other Delaware Indians, for lands in the latter province, were adjusted and satisfied under the cognizance of the Confederates, who ordered them to deliver up their prisoners, and to be at peace with the English, and who assumed a dictatorial tone, and appeared to exercise absolute authority over the other Indians.† At a former conference on this subject, a Munsey, or Minisink Indian, had spoken sitting, not being allowed to stand, until a Cayuga Chief had spoken; when the latter, thus expressed himself, "I, who am the Mingoian, am by this belt to inform you that the Munseys are women, and cannot hold treaties for themselves; therefore I am sent to inform you, that the invitation you gave the Munseys is agreeable to us, the Six Nations." p. 48—53.

"War was the favourite pursuit of this martial people, and military glory their ruling passion. Agriculture, and the laborious drudgery of domestic life were left to the women. The

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* Heriot's History of Canada, p. 79. *(This work is a compilation principally from Charlevoix.)*

† Smith's New-Jersey, 446, &c.

education of the savage was solely directed to hunting and war. From his early infancy, he was taught to bend the bow, to point the arrow, to hurl the tomahawk, and to wield the club. He was instructed to pursue the footsteps of his enemies through the pathless and unexplored forest; to mark the most distant indications of danger; to trace his way by the appearances of the trees, and by the stars of heaven, and to endure fatigue, and cold, and famine, and every privation. He commenced his career of blood by hunting the wild beasts of the woods, and after learning the dexterous use of the weapons of destruction, he lifted his sanguinary arm against his fellow creatures. The profession of a warrior was considered the most illustrious pursuit; their youth looked forward to the time, when they could march against an enemy, with all the avidity of an epicure for the sumptuous dainties of a Heliogabalus. And this martial ardor was continually thwarting the pacific counsels of the elders, and enthralling them in perpetual and devastating wars. With savages in general, this ferocious propensity was impelled by a blind fury, and was but little regulated by the dictates of skill and judgment; on the contrary, with the Iroquois, war was an art. All their military movements were governed by system and policy. They never attacked a hostile country, until they had sent out spies to explore and to designate its vulnerable points, and whenever they encamped, they observed the greatest circumspection to guard against surprise; whereas the other savages only sent out scout to reconnoitre; but they never went far from the camp, and is they returned without perceiving any signs of an enemy, the whole band went quietly to sleep, and were often the victims o their rash confidence.*

"Whatever superiority of force the Iroquois might have, they never neglected the use of stratagems; they employed all the crafty wiles of the Carthaginians. The cunning of the fox, the ferocity of the tiger, and the power of the lion, were united in

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* Colden, vol. 1. p. 110. Heriot, p. 15.

their conduct. They preferred to vanquish their enemy by taking him off his guard; by involving him in an ambuscade; by falling upon him in the hour of sleep: but when emergencies rendered it necessary for them to face him in the open field of battle, they exhibited a courage and contempt of death which have never been surpassed." p. 54—5.

"The conquests and military achievements of the Iroquois were commensurate with their martial ardour, their thirst for glory, their great courage, their invincible perseverance, and their political talents. Their military excursions were extended as far north as Hudson's Bay. The Mississippi did not form their western limits; their power was felt in the most southern and eastern extremities of the United States. Their wars have been supposed, by one writer, to have been carried near to the Isthmus of Darien.* And Cotton Mather, in his Magnalia, which was probably written in 1698, describes them as terrible cannibals to the westward, who have destroyed no less than two millions of other savages." p. 58.

"The Confederates were as celebrated for their eloquence as for their military skill and political wisdom. Popular, or free governments, have, in all ages, been the congenial soil of oratory. And it is, indeed, all important in institutions merely advisory; where persuasion must supply the place of coercion; where there is no magistrate to execute, no military to compel; and where the only sanction of law is the controlling power of public opinion. Eloquence being, therefore, considered so essential, must always be a great standard of personal merit, a certain road to popular favour, and an universal passport to public honours. These combined inducements operated with powerful force on the mind of the Indian; and there is little doubt but that oratory was studied with as much care and application among the Confederates as it was in the stormy democracies of the eastern hemisphere. I do not pretend to assert that there were, as at Athens and Rome, esta-

* Rogers' America, p. 209.

blished schools and professional teachers for the purpose; but I say, that it was an attainment to which they devoted themselves, and to which they bent the whole force of their faculties. Their models of eloquence were to be found not in books, but in the living orators of their local and national assemblies: their children, at an early period of life, attended their council fires, in order to observe the passing scenes, and to receive the lessons of wisdom. Their rich and vivid imagery was drawn from the sublime scenery of nature, and their ideas were derived from the laborious operations of their own minds, and from the experience and wisdom of their ancient sages.

"The most remarkable difference existed between the Confederates and the other Indian nations, with respect to eloquence. You may search in vain in the records and writings of the past, or in events of the present times, for a single model of eloquence among the Algonkins, the Abenaquis, the Delawares, the Shawanese, or any other nation of Indians, except the Iroquois. The few scintillations of intellectual light; the faint glimmerings of genius, which are sometimes to be found in their speeches, are evidently derivative, and borrowed from the Confederates." p. 70—71.

The preceding quotations may furnish the reader with some of the more prominent features in the characters of these "Romans of the Western world." Mr. Clinton, with no less ability, has described the present condition of the Six Nations, and pointed out the principal circumstances which have caused them to lose their formerly distinguished and elevated standing.

"The causes of their degradation and diminution, are principally to be found in their baneful communication with the man of Europe; which has contaminated their morals, destroyed their population, robbed them of their country, and deprived them of their national spirit. Indeed, when we consider that the discovery

and settlement of America have exterminated millions of the red men, and entailed upon the sable inhabitants of Africa, endless and destructive wars, captivity, slavery and death, we have reason to shudder at the gloomy perspective, and to apprehend that, in the retributive justice of the Almighty, "there may be some hidden thunder in the stores of Heaven, red with uncommon wrath;"* some portentous cloud, pregnant with the elements of destruction, ready to burst upon European America, and to entail upon us those calamities which we have so wantonly and wickedly inflicted upon others." p. 84.

The discourse concludes with a very becoming notice of the numerous remains of ancient fortifications, those proud monuments of Indian ingenuity and labour. The author considers all the hypotheses which attribute those works to Europeans, as incorrect and fanciful: 1st, on account of the present number of the works; 2d, on account of their antiquity, having from every appearance been erected a long time before the discovery of America; and finally, from their form and manner being totally different from European fortifications, either in ancient or modern times.

Upon the whole, it will readily appear that this discourse is not calculated merely for the purpose of gratifying present curiosity, but that it lays claim to a permanent place among the contributions to the stock of general knowledge. Mr. Clinton has performed for the Confederates what Tacitus did for the Germans.

A Discourse delivered before the New-York Historical Society, 6th December, 1812, by the Hon. Gouverneur Morris, First Vice President of the Society.

The State of New-York may justly be considered as the

* Addison's Cato.

most important member of the federal union: whether we regard her numerous population, her commercial advantages, or her immense internal resources, her claim to this distinction is equally well founded. Her present prospects, moreover, warrant the assertion that her future standing among her sister states will be still more pre-eminent: this opinion is the result of a minute view of the progressive condition, population, resources, &c. &c. of the several states, composing the American confederation, from their first settlement to the present time.

In the performance before us, Mr. Morris has presented some reflections "on prominent historical facts, and geographical circumstances, which distinguish the State of New-York." This the honourable orator has done at considerable length, and in a very able manner: and has taken occasion to intersperse throughout the discourse many interesting and judicious observations.

"On a cursory glance at the map of North America, our eye is caught by that deep indent, where Long Island, (whose eastern point lies between thirty and forty leagues west of the south end of Nantucket shoal,) after stretching thirty leagues, on a course but fifteen degrees to the southward of west, is separated by a deep bay from the main land, whose general direction, from Sandy Hook to Cape Hatteras, is but seventeen degrees to the westward of south. The upper end of that bay, divided from the lower by Staten Island, is nearest to the valley which embosoms the great lakes, the St. Lawrence, and the Mississippi, of any sea port on the Atlantic; and the hills which intervene are neither so numerous, so lofty, nor so steep, as those by which other routes are obstructed. The city of New-York, at the head of this bay, from causes which will probably endure as long as the earth itself, is generally accessible; and the navigation to it is frequently open when that of more southern situations is barred by frost. The channel on the west end of Long Island, though

broad and deep, may be so obstructed as to frustrate hostile attempts. The other channel, whose mouth is two degrees to the eastward, and therefore of easier and safer access in dark bad weather, presents a secure and pleasant passage till within eight miles of this city. There a rapid whirlpool and projecting rocks (our Scylla and Charybdis) render it so narrow and difficult, that, although perfectly safe at a proper time, and with a good pilot, it may easily be rendered too hazardous for an enemy. By the first of these channels, vessels outward bound, within a few hours after casting off from their moorings, gain the open sea. By the second, those which arrive can, with common prudence, reach safe anchorage without a pilot; and the distance from the mouth of the one to that of the other is such that both cannot easily be blockaded by the same squadron. These circumstances alone point out New-York as a commercial emporium.

" But there are others which contribute largely to the same effect. Beside many small streams, the great Connecticut River pours its waters into the eastern channel; and the western shore of Manhattan Island is washed by the Hudson, navigable fifty leagues by large vessels; and what is peculiar to this noble canal, ships take with them a favouring tide beyond all the ranges of mountain east of that great valley already mentioned, which stretches upward of fourteen hundred miles in a southwestern direction from the island of Orleans, in the Lawrence, to the city of Orleans, on the Mississippi. To this valley an inland navigation from the Hudson can easily be extended northward to the St. Lawrence, and westward to the great lakes, whose depth, whose extent, whose pellucid water, and whose fertile shores, are unparalleled. It is probable, that if our western hemisphere had been known to antiquity, those immortal bards who crowned their thundering Jove on the peak of Olympus, would have reared to commerce a golden throne on the granite rock of Manhattan. They might have pictured her as receiving, in a vast range of magazines from Haerlem village round to Haerlem cove (a distance of twenty miles) the willing tribute of mankind; as fostering industry in the remotest regions; scattering on barren shores that plenty which nature had denied; dispensing to millions the

multiplied means of enjoyment, and pouring the flood-tide of wealth on this her favoured land. Not, indeed, that wealth which, the plunder of war and the wages of vice, exalts a rapacious head over a servile crowd; but that honest wealth, which, accompanied by freedom and justice, comforts the needy, raises the abject, instructs the ignorant, and fosters the arts. Such are the outlines of a picture which, adorned by classic colouring, might, with the Iliad, have been recommended to his royal pupil by that sage whose mind, acute and profound, was equally skilled in moral, physical, and political science." p. 120—2.

"Our state will support a population of four millions. Already it exceeds nine hundred thousand white inhabitants, although twenty years ago it was but little more than three hundred thousand. When, therefore, the salubrity of our climate, the fertility of our soil, the convenient situations for manufacturing establishments, and our advantageous position for trade, are considered, there is reason to believe the period not distant when we shall count four million inhabitants: and, certainly, our wealth, if we are blest by a good government, must keep pace with our population. New-York, connected with her eastern brethren and New-Jersey, had, in 1810, more than two million and a half of white inhabitants; wherefore we may reasonably conclude, that in half a century they will contain eight millions; for in 1790 their number was short of one million and a half, and in 1800 was near two; having increased about one third in each term of ten years, but more than three fourths in the whole term of twenty years, viz. from 1,476,631 to 2,597,634. Though not distinguished as a manufacturing people, yet, judging by those fruits which the inventive genius of our fellow citizens has produced, we may reasonably foster, even in that respect, exulting expectations. Numerous on land, we are not strangers at sea. Our country abounds in iron, and the use of it is not unknown to her children" p. 136.

Mr. Morris's discourse is written in the usual style and spirit of the author, and will in no way diminish his established reputation.

A Discourse delivered before the New-York Historical Society, 6th Dec. 1813, *embracing a concise and comprehensive account of the Writings which illustrate the Botanical History of North and South America: by Samuel L. Mitchill, M. D. one of the Counsellors of the Society, &c. &c.*

In executing the present arduous undertaking, Dr. Mitchill acknowledges himself greatly indebted to the valuable *Catalogue* of J. Francis Seguier which was completed about 1740, and to a still more elaborate performance, the *Bibliotheca Botanica* of Haller, which was published at London during the years 1741 and 1742. But these works, extensive and able as they are pronounced to be, are in several respects defective: and when it is recollected that more than forty years have elapsed since the appearance of the last of these productions, it will at once be perceived that a complete catalogue, extending to the present time, of the writers on the vegetables of North and South America is a desideratum in botanical science. Dr. Mitchill has attempted to supply this deficiency in the present instance; and it is but justice to say that his performance is a key to much valuable information; that he has aptly arranged the labours, and, with few exceptions, estimated with fidelity the merits of the respective writers whom he has noticed; that, upon the whole, this discourse is creditable to his diligence and learning.

The articles already noticed are those only which may properly be considered as *original*; the subsequent part of this volume of the Collections contains *An account of Monsieur De La Salle's last Expedition and Discoveries*

in North America; presented to the French king, and published by the Chevalier Tonti, governor of Fort St. Louis, in the province of the Islinois. This very scarce and important tract is reprinted from the London edition of 1698. *An Extract of a Translation of the History of New Sweed land in America, written in Sweed, by Thomas Companius Holm, late of New Sweed land, al's Delaware,* and printed at Stockholm, A. D. 1702. This communication which was favoured the Society by Dr. Mease of Philadelphia, furnishes some valuable information concerning this Sweedish Colony and its reduction in 1655, by the Dutch of New-York, under the command of Governor Stuyvesant.

For the extensive and well-arranged *Catalogue* annexed to this volume, the Society is indebted to the Rev. Timothy Alden, A. M. &c.

ART. II. *Transactions of the Society for the Promotion of* USEFUL ARTS *in the State of New-York. Vol.* III. Albany. Websters and Skinners. 8vo. pp. 262. 1814.

THE excellent address of Dr. Beck, on the mineralogical resources of the United States, and of which due notice was taken on a former occasion,* constitutes the first communication, in the present volume, of the transactions of this praise-worthy institution. Next follows an *eulogium* on the late chancellor of this state, the Hon. ROBERT R. LIVINGSTON, LL. D. the original president, and it may be added, the founder and chief patron of this society. This eulogium is from the pen of the Rev. Timothy Clowes, A. M. and was pronounced by appointment, in the city of Albany, on

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* Register, vol. iv. p. 255.

the 31st of March, 1813. The tribute which is here paid to the memory of the deceased chancellor was richly merited by a long series of various and important services which this great and excellent man rendered his country: the account of his life and character now furnished by Mr. Clowes affords a successful effort of the talents of the orator.

The third communication in the present volume is an *Address on the Botany of the United States*, delivered before the society on the 9th of February, 1814; to which is added, a *Catalogue of Plants* indigenous to the state of New-York, by Jacob Green, A. M. &c. &c. As the labours of our indigenous writers, in exploring the natural resources of this country, and in furnishing accurate accounts of the vegetable and mineralogical productions of America will be more beneficially and more sensibly felt than by their directing their attention to any other departments of science, the contribution now made to the stock of botanical information cannot fail to be received with approbation. Mr. Green appears to be fully sensible of the importance of his subject; and accordingly, with much propriety, points out some of the principal advantages which we possess for the study and improvement of the botany of North America. His observations on a number of the plants of this country which claim particular notice from the agriculturalist, the manufacturer, the artist, and the physician, are calculated to call the attention of the American farmer and of others to a more general cultivation of this source of domestic revenue. Two or three extracts from Mr. Green's address may with much advantage and propriety be here republished.

"The curious and beautiful Candle Berry Myrtle (Myrica Cærifera) is very abundant in many parts of the United States. The wax which this tree yields would amply compensate the trouble of obtaining it. In Maryland, on the shores of the Chesapeake, and near most of the streams which flow into that

bay, it is found in large quantities. It is also scattered over this state growing in a wet soil, and very rarely exceeding five or six feet in heighth. The plant, however, is not confined to marshy grounds. I have seen it on upland in Connecticut, rising to the height of ten or twelve feet. This species indeed is rarely seen, and the berries are not so abundant in this as in the other kinds.* In Louisiana there is another species of this tree as large as the cherry, bearing pointed leaves,† (Myrica Cærifera Angustifolia;) those of the other being broader and more obtuse; (Myrica Cærifera Latifolia.)‡ In France the myrtle is cultivated for its wax,§ which is prepared by simply boiling the berries in water; the wax rising to the top of the vessel. It is apt to be of a pale green colour, which is not reckoned handsome. This however may probably be remedied by throwing some alkali into the boiling water, which will convert the wax into a deep green. The experiment indeed I have not attempted, but there can be no doubt of its success. By chemical agents it is probable that almost any colour may be given to this wax. From four pounds of the berries, one pound of wax is obtained, superior in quality, and applicable to all the purposes of bees wax. Candles made of it afford a clear white flame; and if burned newly made, they emit an agreeable, and, it is said, a salubrious odour. Should the myrtle wax excite proper attention it might be highly advantageous to medicine as well as to the arts."‖

"Opium has also been extracted from the common lettuce (Lactuca Sativa) simply by evaporating the juice of the plant. Eight heads of full grown lettuce yielded, in one instance, seven drachms of opium. Hops also contain a large quantity of the

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* I rather think the Connecticut myrtle wax tree is only a variety of the species which is found in a wet soil.

† Medical Repos. vol. 12, p. 191.

‡ Two varieties of this tree are found at the Cape of Good Hope. Barrow's Tour in Africa, p. 18, Am. ed.

§ Medical Repos. vol. 12, p. 192.

‖ For the medicinal qualities of the myrtle wax, see Barton's Collections, part 2, p. 4—and for experiments on its analysis, Dr. Bostock's Memoir, in Nicholson's Journal, March, 1803—and for the mode of propogating the tree and manufacturing the wax, C. L. Cadet's Account, Nicholson's Jour. vol. 4th.

narcotic principle, and the extract of hops is now in use in some places as an anodyne. Indeed we abound in every species of anodyne plants, and the country physician, with a little care, might supply himself with opiates from his own garden.

"But I must observe that the opium of the poppy is not the only benefit which its cultivation would afford.—From the seeds an oil may be extracted as salubrious and agreeable as the finest Florence oil.—The quantity of this oil which is consumed, and the frequent difficulties which attend its importation, would make the extraction of it from the poppy a lucrative employment.* I am glad to state that in Pennsylvania some acres of ground are planted with the poppy for this purpose. As the quality of the olive oil is much affected by the acidity or richness of the soil in which the plant grows, it would be well to notice these circumstances in the cultivation of the papaver.† It is hardly necessary to add that the opium and the oil may both be extracted from the same plant.

"Large quantities of Sugar are annually extracted from the Maple tree, (Acer Saccharinum) in many parts of the United

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* There have been many doubts suggested respecting the wholesome qualities of this oil—but the question that it is not deleterious is now settled—See the Abbé Rosier's experiments, quoted in Archives, vol. 2, p. 176.

† At Harmony, half a day's ride from Pittsburgh, (both places objects of very great interest) the settlers use oil expressed from the poppy seed, exclusively, in lieu of olive oil, for sallads, &c. It is nearly if not quite equally good. This oil is becoming common in Europe as a substitute for olive oil. The poppy seed may be eaten with impunity when ripe. I do not see why its use should be confined to the settlement of Harmony. The Ben, Bene, or Benni seed common in the Carolinas, can furnish, as I am informed, oil enough to supply the United States at a cheap rate. I have eaten the oil of the Ben or Behen nut in England, and I find no difference between it and the olive oil. Why should this last be imported? But I doubt whether the Ben or Behen nut be the same with the Benni seed. I suspect this last to be the *Sesamum*;* but I have never seen it. The Behen nut, *Glans unguentarius*, *Balenos murepsiki*, is the fruit of the *Guilandina Moringa*. The oil is prepared in the Levant, in Egypt, in Syria, and in Italy, by expression. It is valuable for its purity, and its freedom from smell and taste, and for its property of remaining long without alteration or rancidity, which makes it extremely valuable in pharmaceutical preparations. *Rees' Encyclopædia.*

* *The author is correct in his conjecture: the benni is now well ascertained to be the* sesamum orientale *of Linn.* Ed. of the Rev.

States; and the subject has already received the attention of some writers.* I shall therefore in this place notice only the Sugar Cane, (Saccharum Officinarum:) this was introduced into Georgia a few years since and has been found to grow there in great perfection.† The saccharine matter of the Georgia cane is quite as rich and plentiful as that from the cane of the West-Indies. It is supposed that most of the land in that state near the coast, south of Sansbury, may be converted into sugar plantations; and since it is pretty well ascertained that more cotton is raised than the manufactories of that article consume, the sugar cane might be advantageously substituted for it.‡ The interests of humanity, however, would not be advanced by the exchange, as they employ more slaves to make the sugar than to cultivate the cotton.

"The Fiorin grass, or Agrostis Stolonifera, is a native of the United States.§ Our fellow member Charles Whitlow first discovered it in Sussex county, New-Jersey, and afterwards on the margin of the Genesee river. It grows also in great profusion on the island below this city.‖ Dr. Mease mentions that he found it on the commons of Philadelphia. This I believe to be incorrect. It is the Agrostis Cappillaris,¶ and not the Stolonifera, which is seen in that place.

"The Fiorin grass has excited much attention in this country, since the introduction of Merino sheep; these animals being remarkably fond of it, and the grass, from its succulent qualities,

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* See American Philo. Trans. for an important paper on the maple tree, by Dr. Rush.

† Medical Repos. vol. 12, p. 192.

‡ Dr. Mease recommends the raising of the papaver in room of the cotton.

§ There are six species of the Agrostis mentioned by Dr. Muhlenberg as natives of this country: two of these are new species; the Capillaris is among the number, but not the Stolonifera. See Muhlenberg's Floræ Lancastriensis, in American Philos. Trans. vol. 3, p. 160.

‖ On this island is found the Avena elatior and in the small compass of 6 feet I have seen 6 or 8 different species of grass.

¶ Archives of Useful Knowledge, vol. 2, p. 278.

being well adapted for their fodder. Indeed, most cattle prefer it as food to the other grasses; and it is particularly proper for cows, as it is said to increase the quantity and to improve the quality of their milk.

"The advantages in agriculture of the Agrostis are of no recent date. There is a species of it called Durva, growing in the north of India, which for a long time has been very greatly prized. Sir William Jones in his catalogue of Indian plants, when speaking of this, observes "its flowers in their perfect state are among the loveliest objects in the vegetable world, and appear through a lens like minute rubies and emeralds, in constant motion from the least breath of air. It is the sweetest and most nutritious pasture for cattle, and its usefulness, added to its beauty, induced the Hindus in their earliest ages, to believe it the mansion of a benevolent nymph. Even the Veda (or holy and immortal book) celebrates it in the following text from the Athervana.* "May Durva which rose from the water of life, which has a hundred roots and a hundred stems, efface a hundred of my sins and prolong my existence on earth a hundred years."†

"Among the many superior qualities of the Fiorin grass are the following: Its active principle of life, which is not destroyed by the operations of nature fatal to other grasses. It thrives equally well in a moist, a dry, and a shallow soil. It appears little affected by the influence of the sun. Hence it may be found growing near the north side of a wall. It is regardless alike of the severe cold of winter, and the intense heat of summer. Its crops are enormous and double; both crops, in one instance, amounted to nearly eight tons and a half per acre,‡ and in another ten tons were gathered.§

"The propagation, culture and properties of the Fiorin grass have been unhappily exaggerated by the lovers of new improve-

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* The fourth great division of the Veda.

† Quarterly Review, vol. 1st, p. 307.

‡ Archives of Knowledge, vol. 2, p. 273.

§ See Edinburgh Farmer's Magazine.

ments; who, not satisfied with advantages which are really peculiar, attribute to this herb every fancied desideratum. Yet, after making sufficient allowances on this score, the Fiorin grass has unquestionably many excellencies, which ought to give it the highest standing in this class of vegetables."

"The Urtica Whitlowi, discovered in the year 1810, by Mr. Whitlow, promises to be a better and more lucrative production than hemp or flax. Dr. Muhlenberg gave this important plant its present name in compliment to the discoverer. It is found in great abundance on the island below this city; a place perhaps more fertile in plants, than any other, of equal dimensions, in the United States.

"The fact is now well established, that the culture of hemp offers a greater profit to the farmer, than if he should employ his time, his labour, and his field in any other manner heretofore known: but if the Urtica has a finer and stronger fibre, and wi produce more on a given portion of land, it will eventually supersede the hemp.

"The soil best adapted to the Urtica is wet meadow land; and it will thrive in ground covered with water many months in the year. It grows also to advantage in a rich, moist, upland loom. It can be raised from the seed or root, as it is a hardy perennial. The seed should be planted in the spring, and the roots in the fall months. If the fibre is wanted for the finest fabrics, the plant should be cut while in full flower; but if only for common use, it will yield more by standing till completely ripe. After being cradled, which is the most proper way to cut it, the stalk should be suffered to lie on the ground some days, as the stinging quality, which is peculiar to the growing nettle, is thus removed. The Urtica is rotted in the same manner as hemp, only it requires a longer time for the purpose: but it is not affected by the inclemency of the weather.

"The legislature of this state, at their last session, incorporated a company for the manufacture of this plant, and the

United States have granted a patent to Mr. Whitlow for its discovery."*

"Though not critically proper in a discussion on botany, I may be allowed the liberty of introducing in this place a few observations on some colouring vegetables. The late discovery of the Zanthorhiza Tinctoria in the United States promises to be extensively useful. This shrub is found on the Alleghany ridge from Virginia to Georgia, and it probably may be found on most of the upland country. The extract, or even decoction of the whole plant, forms a fine yellow dye, which may be varied by saturation or dilution, from the brightest straw colour to the deepest orange. In combination with indigo, or most other blues, all the different shades of green may be produced. The stain which it makes on cloth is not apt to fade or wear off, and it may also be applied without using any mordant. Specimens of cloth dyed with the Zanthorhiza were shown to the society last winter. This plant also possesses many medical virtues.†

"Isatis Tinctoria, or Woad, is well known as a blue, and still better as the basis of black. The colouring matter is obtained from the leaves. The plant can be raised here with little trouble, and in great abundance. In the neighbourhood of this city there are some fields planted with it. The Isatis, in conjunction with the Zanthorhiza, gives us the three principal dies in colour making.

"The Galium Tinctorium is also one of our native plants. It flourishes most in places sheltered from the sun, and where the ground is rather moist. This plant so nearly resembles the Madder (Rubia Tinctorium) in its botanical character, as well as in its colouring properties, that some writers have given it the name of Rubia Americana. The Galium is employed by the inhabi-

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* For many interesting particulars respecting the cultivation of this valuable nettle, examine a paper published by the corporation of the city of New-York, and the Baltimore Medical and Philosophical Lyceum.

† See Barton's Collections, part 2, p. 11, 12, and 13.

tants of Jura, one of the Hebrides,* as a red die, and it is perhaps equal to the rich red of the Rubia itself. Upon turning over the pages of our Transactions, I find that the Galium has already received your attention and patronage.† The true Rubia was raised last summer at Pittsfield by Mr. E. Watson, who will, I understand, read you in the course of the winter a paper on this article. The Rubia has for a long time been raised in Connecticut, but only in gardens. I understand the Shakers have also planted it.

"The cochineal plant (Cactus Coccinellifer) has been discovered in South Carolina, where it can be cultivated to any extent. We may therefore reasonably hope that the invaluable die extracted from the insect which gives this plant its name, and which always accompanies it, will speedily be numbered among our staple productions.‡

"The juice of the common pokeberry (Phytolacca Decandra) has lately been added to the list of permanent vegetable dies. Dr. Adam Seybert, of Philadelphia, was the first who succeeded in fixing this colour, which can be changed from the brightest crimson to a red, little inferior to scarlet. It is expected from the further discoveries which are likely to be made on this colour, that the cochineal, which is so expensive, may be generally dispensed with.§

"The Quercitron, a species of oak, and native of this country only, has long been esteemed for producing a yellow dye. Dr. Bancroft, who first carried it to Europe, received a patent from the English government for its introduction there, and acquired a large fortune by the enterprise. The pulverized bark was the state in which the quercitron was imported and used. But works are now erected at Fitchburgh, in Massachusetts, for obtaining the extract of the quercitron, by a new process; which contains

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* Encyclopædia Britannica, article Jura.

† Agricultural Trans. vol. 1st, p. 367.

‡ Archives of Knowl. vol. 1st, 257.

§ See Aurora, October 5th, 1813.

the virtues of the bark in substance in a very condensed state. One pound of this extract affords as much colouring matter as fifteen or twenty pounds of the pulverized bark."* p. 77, &c.

Mr. Green's Catalogue of Plants indigenous to the state of New-York very properly accompanies his address. Though this catalogue might have been enlarged by the addition of some other genera and species which have been naturalized, and now grow spontaneously, the author has thought it more proper to confine the list to those which are indigenous. Few, however, of the cryptogamous tribes are here inserted, Mr. Green designing, on some future occasion, to treat of this class more at large. The author candidly acknowledges the assistance he has derived from the collections of plants made by Messrs. Le Conte, Pursh, Eddy, Beck, and others.

The communication from the present president of the society, Simeon De Witt, Esq. is on *drawing in perspective mechanically*. It contains an account of the diorascope, an instrument lately constructed by the author for the purpose of attaining a greater degree of accuracy in military perspective. To the account of his diorascope he had added a description of the dioragraph. But an accurate idea of Mr. De Witt's improvements cannot be conveyed without the engravings which illustrate his paper.

E. C. Genet, Esq. member of the National Institute of France, &c. has furnished three interesting papers: No. I. —*Remarks and Notes on Colours.*

"America," observes Mons. Genet, "supplies Europe with several articles used for dying, and possesses many others kept secret by the Indians, or used by private families for their own good. I have collected all the information I could on these native

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‡ See Literary and Philos. Repos. for Nov. and Decem. 1812, p. 148.

dies, and thinking that the friends of science must be liberal, and that concealment and philosophy ought to be as far distant as the arctic pole is from the antarctic, I shall offer here the result of my remarks on a great variety of vegetable colours which I have tried, and I shall conclude these notes by a description of the method used in France to make the solution of tin, and to procure with the assistance of that invaluable mordant the best and most durable scarlet, dark blues, and black.

List of native vegetable substances which contain colouring principles, and the mordant which will best set them.

Vegetables.	*Colours.*	*Mordant.*
Poplar,	Yellow,	Alum and soda.
Apple trees,	do.	———
Locust,	do.	do.
Persimmon,	Crimson,	do.
Oak trees,	Steel colour,	Copperas.
Nut trees,	Olive,	do.
Maples,	Purple,	do.
Sassafras,	Red,	do.
Madder,	do.	do.
Stone fruit trees,	Cinnamon and nankeen colour,	Alum and soda.
Sumac, hazel nut, and alders,	Black,	Copperas.
Woad,	Blue,	Solution of tin.
False Indigo,	do.	do.

"Several fruits yield also very handsome colours, with proper mordants. The berries of the pokeweed or pigeon berry (Phytolacca) give an elegant red equal to the cochineal. The blue huckleberry or whortleberry (Vaccinium) gives a blue superior to the mazarine, and the winter grape, resembling very much the dier's grape of the French, called *noireau*, gives the finest violet.

SOLUTION OF TIN.

"To prepare this mordant, the French chemists take two parts of spirit of nitre and one of fuming spirit of salt. They dissolve in this liquor the purest tin that can be procured; they granulate it and throw it by degrees in the mixture. The quantity of tin must be to that of the liquor as one to twenty, though more tin may be added if the liquor will dissolve it. To use this mordant it must be diluted in two or three parts of clear stream water, according to its strength, until it is found to have the acidity of vinegar or lemon juice.

SCARLET.

"To make the best scarlet, three parts of water to one of solution of tin are mixed together, and to procure the different shades and varieties of light red, rose, and orange, the quantity of cochineal and mordant must be reduced.

BLUE.

"To give a dark and unchangeable blue colour to wool, the French and German manufacturers mix one part of pulverized indigo of the best quality with eight parts of vitriolic acid, well concentrated, and leave it without being disturbed twenty-four hours. They then add by degrees to the mixture ninety-six parts of pure and soft water, and stir it repeatedly. The wool dipped into it comes died with a dark blue colour. If the colour, however, is too dark, and approaches too much to the black, it may be rendered lighter by soaking the wool or cloth a whole day in a bath composed of twenty-four parts of pure and soft water and one part of sea salt well dissolved and cold. Alum may also be used as a mordant for indigo, and if wool or cloth are immerged after it has been died with that mordant in a bath containing a solution of soda, it will acquire a darker colour. The same method will apply to silk, but not at all to linen and cotton.

BLACK.

"To make a handsome black, the wool must first be died blue, and afterwards blackened with the usual ingredients. The pericarpium, or husk, which covers the hazel nut when green, is used

in France in preference to any other substance to procure a handsome black. The husks of our nuts and the witch hazel (hamamelis virginica) might equally be used to advantage; but the hazel nut husk, if they could be collected in sufficient quantity, would be far preferable." p. 50—2.

No. II.—*On the economical utility of the Apocinum Cannabinum, or Indian Hemp, and the Asclepias, or Milkweed, natives of the State of New-York.* In this valuable paper, the principal object of Mons. Genet is to consider the economical benefits which may arise from the proper cultivation of these vegetables. The author has been informed that ropes and yarn made from the fibres of the apocinium were far superior, for strength and durability, to those made of flax and hemp. The third communication from E. C. Genet is *On the use of milk to regenerate decayed Sheep, and for other purposes.*

The next article is Dr. Benjamin De Witt's *Letter on Chimney Fireplaces,* addressed to R. R. Livingston; which has already been for some time before the public, in the New-York Medical and Philosophical Journal and Review.

On the cultivation and manufacture of Woad. As the cultivation of the woad plant (the *isatis tinctoria*) will in all probability prove a profitable branch of husbandry, and be of material advantage in our woollen manufactories, the society, at the suggestion of W. W. Morris, Esq. have republished, from the Bath and West of England Agricultural Society papers, the essay on this subject from the pen of Mr. John Parish. Some judicious remarks are contained in the *Paper on the importance of regulating the inspection of Flour, &c. in the State of New-York,* by Jonas Humbert, and in the *Letter* from Professor Brownell, of Union College, on the subject of *Merino Sheep.*

Researches on the light manifested in the combustion of inflammable substances, by Count Rumford, F. R. S. and Foreign Associate of the National Institute; read at the sitting of the first class of the Institute, October 14, 1811. Translated by James Low, M. D. and Secretary to the Society of Arts. Observations on the means of perfecting Lamps, with a Description of a new portable one, by Count Rumford, F. R. S. and Foreign Associate of the National Institute. Read at the sitting of the First Class of the Institute, June 24th, 1811. Translated from the French, and read before the Society for the Promotion of Useful Arts, March 25th, 1812, by T. Romeyn Beck, M. D. &c.

Our limits do not allow us to enter into any analysis of the contents of these important papers. The volume closes with an *Appendix*, containing certain proceedings of the legislature of the state of New-York, and of the Society for the promotion of Useful Arts, for the encouragement of the manufacture of woollen cloth; a law organizing certain classes or committees in the society, &c., and an alphabetical list of its members.

ART. III. *A System of Anatomy for the use of Students of Medicine.* By CASPAR WISTAR, M. D. *Professor of Anatomy in the University of Pennsylvania.* Philadelphia. Dobson, 8vo. vol. 1. pp. 422. 1811. vol. 2. pp. 454. 1814.

The author to whom we are indebted for the present system of Anatomy has long occupied a station of eminent distinction in the medical world. As an accurate and sagacious observer, his abilities in the discharge of the more practical duties of his profession have given an established character to his opinions, while his merits as a public teacher have

acquired for him a reputation not to be enhanced by any encomium of ours.

This work is particularly intended for the use of the student of anatomy when the objects which it describes are before him. "Convinced," says the author, "that the structure of the human body cannot be properly understood without studying the real subject, I have not attempted to communicate an idea of it by description without demonstration; and as this is the nature of the work, there are no engraved plates in it." This design, as might have been anticipated, from the learning and talents of the author, has been ably and faithfully executed. The medical literature of the United States is enriched by the publication of these volumes.

ART. IV. A VIEW *of the* MERCURIAL PRACTICE *in* FEBRILE DISEASES. *By* JOHN WARREN, M. D. *President of the Massachusetts Medical Society, and Professor of Anatomy and Surgery in the University of Cambridge.* Boston. T. B. Wait & Co. 8vo. pp. 195. 1813.

MEDICINE, like the other branches of natural knowledge, may with propriety be considered an *experimental* science; and hence it is obvious, if we ever wish to attain to any thing like certainty in it, that the only principles upon which it can be properly established must be derived from well attested *facts*. The process of reasoning by induction, so beneficially experienced in prosecuting inquiries in the collateral branches of learning, will no doubt apply with equal success in medical investigation, and be as frequently followed by results no less salutary. It is therefore with peculiar pleasure we take up the present volume, knowing, as we do, that it is the performance of one who has long held a distin-

guished rank among the most eminent practitioners of this country, and who, amidst the fatigues of professional avocation, finds leisure sufficient to enable him to record for the benefit of others the important results of his own extensive experience.

Dr. Warren commences with a *prospective introduction*, in which are briefly stated the several subjects which he has attempted to discuss. The work itself is divided into four parts. The first opens with a general history of the mercurial practice, which is followed by observations on quicksilver and its medical preparations; on the operation of mercurials upon the body; on their action as stimulants; their operation on disease; on the changes which mercurials effect by their action in the system, and on salivation. Dr. W. seems to coincide in opinion with Mr. Hunter, that mercury creates a new action in the system, or what may be termed an artificial disease, by which the original disorder is either subdued or cured; that its operation is chiefly that of a powerful stimulant; and that this effect is produced from the oxygen with which the metal is combined; though he inclines to the belief that the activity of mercurials does not depend upon oxygen alone.

"Mr. Cruikshank, of Woolwich, in March, 1795, destroyed variolous virus by oxygenated mucilages.

"Without, however, supposing that oxygen has a specific power over the poison, in these cases its action may easily be accounted for, on the principle of a stimulant exciting the system to defend itself against it, or totally to expel it.

"It is a well known fact in pneumatic medicine, that oxygen, prescribed in small quantities, invigorates the constitution without exhausting the excitabilty.

"May we not, then, conclude it probable, that mercury may cure contagious fever by furnishing oxygen to the blood and the so-

lids by a sort of digestive power separating the oxygen, and, perhaps, expelling the metallic part of the oxyde from the surface of the body; and that the success with which it has been used in putrid fevers, in which the deficiency of oxygen is generally, I believe, acknowledged, is derived from its supply.

"Indeed, Dr. Darwin supposes that the sensorial power, which is in fact the same thing with excitability, is secreted in the brain from the oxygen in the blood. If so, the utility of the mercurial oxydes in supplying the mass with that material is obvious; and it needs not to be remarked, how much this circumstance must co-operate with the stimulant effect of the oxygen, in increasing the sum of excitement in the system." p. 26.

Dr. Warren is opposed to the at present fashionable and pernicious practice of inducing profuse salivation in the treatment of febrile and other diseases.

"It is a question of some consequence, whether it is necessary to salivate in order to cure fevers. As the natural effect of this process is to produce indirect debility, it seems to be generally agreed, that in most cases of fever, especially those of the less violent kind, salivation may with propriety be avoided. It is doubtful, however, whether mercury will generally produce its salutary effect in the habit, without stimulating to a degree that shall affect the mouth; but as the soreness of the gums and mouth is the only index of the degree to which the mercurial impregnation of the blood is carried, this mark is usually aimed at, as a proof that the object has been attained." p. 32.

The subjects embraced in part second are, a general description of epidemic fevers; the practice in epidemics with mercury; and observations on the general use of mercury in fevers combined with hepatic and other visceral affections. To his own excellent remarks on these several points, the author has added many others of a practical nature from the writings of Hume, Moseley, Wright, Chisholm, and Rush.

Part third is divided into two sections; on the practice with mercury in typhus, and on the yellow fever as it appeared in Boston. The author considers the various species of typhus which have been noticed by practitioners under the names of jail, hospital, and camp fever, as "totally different" in their nature from the yellow fever, as it appeared in Boston in 1798 and 1802; and in doing this, while he manifests the superiority of his own judgment, he affords, in our opinion, additional proofs (had further proofs been wanting) of the absurd reasonings of those who have so obstinately contended for the unity of diseases, and who, in their sectarian zeal, have confounded all the different kinds of fever, for the purpose of propping up a weak and pernicious theory.

Typhus, in the form of ship fever, was prevalent in the Alliance frigate, upon her arrival in Boston, in 1780: a large number of the sick were immediately sent to the hospital in that town.

"The symptoms," says Dr. Warren, "were entirely different from those of the yellow fever, which afterwards spread such alarm throughout this part of the United States; and the disease doubtless originated from human contagion, commencing on board, from the peculiar circumstances of that ship. In an attendance on a large number of these cases, scattered in various parts of the town, as well as contained in the crowded hospital, destitute of many of those accommodations which, under any other than the existing circumstances of the country might have been afforded, I had the misfortune to be attacked with the disease, and noted its progress with particular interest." p. 93.

Dr. Warren also describes, with considerable minuteness, a number of cases of a typhus with uncommonly malignant symptoms which made its appearance in Boston, in 1804 and 1805.

On the yellow fever of Boston much valuable information is communicated. Dr. Warren asserts that this disorder never made its appearance in that town as an epidemic prior to the year 1798. According to Dr. Warren, no evidence of the importation of the disease could be produced, nor was there an instance of its being communicated to those who removed out of the sphere of its supposed origination. We thus most cheerfully make known the sentiments of the author, though of their correctness, on these two points, we must be permitted to doubt: we wish that an equal degree of candour were manifested by some of our fellow editors under similar circumstances.

"The symptoms of this disease were much in the form of that described by Dr. Rush, which prevailed in Philadelphia, in 1793. The number of the sick has never been accurately estimated; but about one hundred and forty-five persons died. Most of those who were seized within the first two or three weeks died.

"The bodies of several of the deceased were examined, and the liver, lungs, and stomach, were found to have been highly inflamed, the veins being excessively turgid with black blood; and in one instance the thorax contained a large quantity of blood extravasated from the ruptured vessels of the lungs. After these dissections, several of the practitioners in the town, convinced of the congestion under which those organs laboured, adopted a much freer use of calomel than had heretofore been practised; and the success of the method appeared to justify the means. Candour requires us, however, to mention that the greater number of recoveries in the latter part of the season, was not to be imputed solely to this improved mode of treatment, but in a great measure to the mitigated form of the disease.

"Calomel was usually prescribed, after bleeding and a purge, in doses of two or three grains every two hours, till the mouth became sore; upon which the disease invariably gave way:—in many persons, however, this could not be accomplished. In some cases of salivation, dangerous hemorrhages ensued." p. 115—16.

The fourth part of this work is devoted to a consideration of the mercurial practice in small pox, measles, the throat distemper, cynanche trachealis, hydrocephalus internus, pneumonia and pleurisy, phthisis, dysentery, and rheumatism. No small degree of merit is due to the practitioners of America for their improvement in the treatment of small pox. The information concerning the sore throat distemper which prevailed in Boston in September, 1735, and since that time in several other districts of this country, but more particularly in the eastern states, will be read with satisfaction. We agree with Dr. Warren in his opinion relative to the inefficacy of mercury for the removal of croup: the violence of the symptoms of this disease, and the rapidity of its progress, "are too great to admit of any constitutional change by the operation of this medicine." Though calomel has, for a considerable time, been thought to be the principal if not the only remedy affording any prospect of success in hydrocephalus internus, yet from some recent cases of this alarming disease, which have fallen under our notice, we are disposed to doubt the truth of much that has been said in favour of the efficacy of this mercurial preparation in this complaint. On the subject of consumption the author offers some judicious practical remarks, from which we extract the following as among the most interesting.

"Dr. Rush has published a number of cases of pulmonary consumption treated by mercury.* In three cases salivation proved a complete cure. Dr. Pfeifer relates also a case of a person in a very advanced stage, cured by the same means. This method has been tried in many instances in this place. In one case, which originated from hæmoptysis, it was not successful. In several, where there was evidence of tubercles, and at

* Medical Repository.

length suppuration, it was used through all the stages of the disease, but without advantage.

"The following is the only instance in which I found it useful.

"1805, I visited a lady who for several weeks had laboured under a severe cough, with slight pain in her side. On examination, her pulse was found small and irregular, about 100 in a minute, with short and difficult respiration, stricture over the chest, night sweats, extreme debility, and most of the common symptoms of deep pulmonary affection. Expectoration of matter of a purulent appearance, constant diarrhœa, and extreme emaciation, designated the extreme hazard of the case. She was from home when these complaints first came on, and had taken no medicine till I visited her.

"As her countenance was of a yellowish cast, I gave, the first day, an emetic of ipecac. and an opiate at night. I then gave her the usual expectorant medicines; but for several days the symptoms increased rapidly, and I considered her case as almost desperate.

"Her diarrhœa and cough continuing, I ordered a pill of one grain of ipecac. and two of calomel to be given every twelve hours. On the third day, after having taken six pills, the mouth became to my astonishment suddenly sore, and on examination I found her breath strongly affected with a mercurial fœtor.*

"The pills were immediately discontinued. For several days the salivation continued to increase, the ulcerations in the mouth became extremely troublesome, the breath intolerably offensive, and the gums, tongue, and fauces so much swelled, as to occasion great distress, and almost to threaten suffocation. The most powerful doses of opium procured little rest at night.

"From this time her cough abated, the night sweats were less profuse, her pulse daily became slower, and, by the time the

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* This is one of those cases in which the necessity of great caution in the use of mercury, from the small quantity which will in some habits produce salivation, is exemplified.

salivation had subsided, which was not till the end of the fourth week, all her symptoms had completely disappeared. She has had no complaint of any kind since, has recovered her strength and flesh, and at this time is in perfect health.

"In this case, from the colour of the skin, there was much reason to suspect some hepatic affection; and the efficacy of the salivation, which was indeed entirely accidental, seems to afford some grounds for a conjecture, that the consumptive complaints were merely symptomatic.

"It is possible, that some disease existing in the liver, might, from its connection with the diaphragm, bring on the pain in the chest, and the difficulty of respiration; and from the increased irritability of the coats of the lungs, the quickness of the pulse may be accounted for.

"Whether any affection of this nature might have combined with the diseases cured by Drs. Rush and Pfeifer, is mere matter of conjecture. I have, however, no difficulty in concluding that, in complicated cases of this kind, mercury would be preferable to any other medicine in common use.

"In venereal consumption it may, if seasonably applied, with much certainty be relied upon for a cure.

"In the common tubercular phthisis, the powers of this medicine in promoting absorption might, possibly, be sometimes beneficial; but in the ulcerated state I should much doubt its utility.

"This stage of the disease is easily distinguishable from the other by the appearance of the expectorated matter, according to the established tests for identifying pus, and the uniformity of the symptoms after suppuration has taken place.*

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* An opinion has been entertained that a species of consumption, denominated mucous, is of the same nature with gonorrhœa, owing to an irritation on the mucous glands of the lungs, which prevents their due preparation of the mucus: hence the form of this disease, which is so easily cured by mercury, is inferred to be of this description. Richter's Medical Observations, 1794. p. 272.

"So far as the action of mercury may be considered as dependent on its oxygen, it might be suspected to be injurious in phthisis, by adding more of that article to the already super-oxygenated mass. If it is a fact, that the mass of blood in consumption is in this predicament, the objection must have weight.

"It would seem, however unaccountable, that this should be the case under a state of the lungs in which a part of their vessels must be impervious. It would be natural to suppose, that less oxygen would be absorbed, and the whole system would rather suffer from a deficiency, just as in cases of pregnancy, wherein one pair of lungs is sometimes insufficient to oxygenate the whole mass for both mother and fœtus, and abortion is the consequence." p. 168—171.

The introduction of mercury in the treatment of pulmonary diseases, after allaying inflammatory action by venesection and other evacuants, may be deemed one of the most important innovations in modern practice. In directing the attention of practitioners to the use of this remedy in a disease which, upon a moderate computation, may be supposed to augment the whole number of deaths in the United States at least one sixth, Dr. Rush deserves the tribute of gratitude. We shall only add, that our own success in several recent cases has tended very materially to strengthen our opinion in favour of mercury in the treatment of phthisis, after the removal of the symptoms which more particularly characterize its inflammatory stage.

But without further remarks on President Warren's work, we recommend it to the careful perusal of practitioners, confident that it will amply repay them for their labour by the communication of many important practical facts.

ART. V. A GAZETTEER *of the* STATE OF NEW-YORK; *carefully written from original and authentic materials; arranged upon a new plan. In three parts: comprising, first, A comprehensive geographical and statistical view of the state, conveniently disposed under separate heads: Second, An ample general view of each county, in alphabetical order, with topographical and statistical tables, showing the civil and political divisions, population, post offices, &c.: Third, A very full and minute topographical description of each town or township, city, borough, village, &c. &c. in the whole state, alphabetically arranged; as also its lakes, rivers, creeks, with every other subject of topographical detail: forming a complete gazetteer or geographical Dictionary of the State of New-York; with an accurate map of the State. By* HORATIO GATES SPAFFORD, A. M. *author of a Geography of the United States, member of the New-York Historical Society, and corresponding secretary of the Society of Arts.* Albany. H. C. Southwick. 8vo. pp. 336. 1813.

THE above ample title page so fully makes known the nature and objects of the present work, that it is deemed superfluous to enter into any detail of its contents. The general approbation which it has received from many competent judges, and the rapid sale it has already met with, are sufficient evidence of the merit of the design, and of the ability with which it has been executed. Much is due to the author for the great labour he has undergone in order to procure original and satisfactory materials for his pages, and equal praise for the extent and general accuracy of the information they impart. By the publication of the Gazet-

teer of the State of New-York, Mr. Spafford has set an example which it is hoped will ere long be followed in every state throughout the Union.

ART. VI. COLLECTIONS *for an Essay towards a* MATERIA MEDICA *of the* UNITED STATES. *By* BENJAMIN SMITH BARTON, M. D. *Professor of Materia Medica, Natural History, and Botany, in the University of Pennsylvania.* Philadelphia. Earle & Co. 8vo. pp. 152. 1810.

This, as the reader is informed, is the third edition of these *Collections* towards a materia medica of the United States. Although want of leisure and an imperfect state of health have prevented the author from making those additions to the work of which it is susceptible, and for which he asserts he possesses ample materials, yet he could not consent to reprint it precisely in the same state in which it had already appeared before the public. Though the additional improvements which this volume has received be far from considerable, and some time has elapsed since its publication, yet as this is the only work professedly on the subject of which it treats that has issued from the American press, it is hoped that a brief notice of it will not prove unacceptable.

Professor Barton, in common with other writers, considers the materia medica as naturally divisible into two parts: that which relates to the aliments, or *nutrientia* of mankind, and the *materia medica* more properly so called. In this second division he has disposed of the facts and opinions which he has collected relative to the materia medica of the United States, so far as concerns the vegetable kingdom, under the nine following heads: viz. 1. Astringents. 2. Tonics. 3. Sti-

mulants. 4. Errhines. 5. Sialagoga, or salivating medicines. 6. Emetics. 7. Cathartics. 8. Diuretics. 9. Anthelmintics.

The vegetable productions noticed under the first subdivision, *astringents*, are the geranium maculatum, heuchera americana, actæa racemosa, uva ursi, liquidamber asplenifolium, pyrola umbellata, myrica cerifera, prinos verticillatus, and the orobanche virginiana. Among the *tonics*, Dr. Barton has enumerated a number of valuable indigenous articles of powerful medicinal virtues, and which he considers might be used with advantage as substitutes for the Peruvian bark. The bark of the liriodendron tulipifera (the tulip tree) has frequently been used with success in intermittents: the same may be said of the bark of the populus tremula, or aspin; and of the cornus florida and cornus sericea, (dogwood.) The excellent experimental dissertation of Dr. Walker is properly referred to for much information concerning these two species of cornel. On this part of Dr. Barton's subject, some interesting particulars are communicated relative to the tonic properties of the aristolochia serpentaria, the eupatorium perfoliatum, the zanthoriza apiifolia (the z. tinctoria of Woodhouse) and the hydrastis canadensis, commonly called the yellow root, which grows in various parts of the United States, particularly in rich soils adjacent to the Ohio, and in the western parts of Pennsylvania, Virginia, and Kentucky. In the section denominated *stimulants* the author has, among others, taken notice of the populus balsamifera, the andromeda, and azalea, the laurus sassafras, the arum triphillum, the kalmia latifolia, the phytolacca decandra, (the poke) and the rhus radicans. The most powerful excitant which Dr. Barton has enumerated in the list of *sialagogues* is the zanthoxylum clava herculis, vulgarly known by the name of the toothach tree.

The euphorbia ipecacuanha, spiræa trifolia, and the sanguinarea canadensis, are among the indigenous vegetables of this country most entitled to attention as *emetics*.

"The first of these, the euphorbia ipecacuanha, like all the species of the genus, is an extremely active plant.* It is employed as an emetic by some of the country people. I do not know the dose. I suppose it is small, for it belongs to the head of drastic emetics. I am not certain that it would be a valuable addition to the materia medica; but perhaps it would. There are many cases in which we have occasion to make use of immediate and active emetics; as when certain poisons, such as laudanum, &c. have been swallowed. In such cases it may, possibly, be of much use.

"I can speak with more confidence of the spiræa trifoliata. This is a shrub which grows very plentifully in various parts of the United States. It is one of the few active plants of the class *Icosandria*, to which it belongs.† The root, which is the part made use of, like that of the officinal ipecacuanha, consists of a cortex or bark, and a ligneous or woody part. The active power of the root seems to reside exclusively in the bark. It is a safe and efficacious emetic, in doses of about thirty grains. Along with its emetic, it seems to possess a tonic power. It has, accordingly, been thought peculiarly beneficial in the intermittent fever; and it is often given to horses to mend their appetite. This plant has a number of different names, such as Ipecacuanha, Indian-Physic, Bowman's root," &c. p. 26—7.

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* This species of Euphorbia, or Spurge, grows spontaneously in various parts of the United States. In the state of Jersey, within a few miles of Philadelphia, it is pretty common, growing in the dry and sandy soil. It flowers early in the spring. It is the root which is employed.

† Linnæus thought it very remarkable, that a plant belonging, as this does, to the order of *Senticosæ*, should possess such active powers. "*Spiræam trifoliatam* Ipecacuanam vocant & vomitum facere dicunt, quod sane singulare esset in hoc ordine;" viz. *Senticosæ*. Caroli a Linne, M. D. *Prælectiones in Ordines Naturales Plantarum*. Edidit P. D. Giseke. p. 449. Hamburgi; 1792. But it might be shown, that other plants of the same natural order are considerably active. Not to mention others, it will be sufficient to observe, in this place, that the Spiræa Opuli folia, well known in the United States, by the name of Nine-Bark, is by no means an inert vegetable.

Of the *cathartics*, the milder kind include the triosteum perfoliatum, sometimes termed bastard ipecacuanha; the asclepias decumbens; the mechameck, or wild rhubarb of some of our indians, which Dr. Barton considers the convolvulus panduratus, and is known in Virginia by the name of the wild potato. Among the more active purgatives is the podophyllum peltatum, a common plant through the whole of the United States: it is called by a variety of names, such as may-apple, mandrake, ipecacuanha, wild lemons, &c. The root is the part used in practice. "In doses of seventy grains, it is an excellent cathartic. It has some advantages over the rhubarb and jalap. It is most advantageously used in combination with calomel, or the crystals of tartar." According to Dr. Barton, the United States furnish several native plants possessed of active *diuretic* qualities, which deserve the attention of our physicians; such as the seneka snake root, the lobelia syphilitica, the serratula spicata, and the cassena.

"The Cassena is a species of Ilex, or Holly. It is the Ilex vomitoria of Aiton, and is a native of Carolina, West-Florida, &c. It has been called South-Sea tea, or Evergreen-Cassine. It is thought to be one of the most powerful diuretics hitherto discovered. It is held in great estimation among the southern Indians. They toast the leaves, and make a decoction of them. It is the men alone that are permitted to drink this decoction, which is called "Black Drink." p. 38.

To the preceding notice of the cassena, Dr. Barton has added some interesting information from Lawson's New Voyage to Carolina.

Of the remedies generally arranged under the name *anthelmintics* we have many: the most celebrated of them is the Carolina pink root, now so generally known and deservedly

valued. The others mentioned in the present work are, the chenopodium anthelminticum, helleborus fœtidus, lobelia cardinalis, silene virginica, polypodium vulgare, veratrum luteum, &c.

In his second part Dr. Barton has a section under the term *antilithics*. "By this term, says he, I mean those medicines which give relief in the disease of lithiasis, or calculus, and also in nephritis, when this depends upon the same causes that induce calculus." This name he prefers to that of lithontriptics. The uva ursi, and the pyrola umbellata, seem to be the most important of the native vegetables calculated to be of service in affections where antilithics are indicated.

We have thus attempted to give some idea of the contents of these Collections; and must refer the reader for fuller and more satisfactory information to the volume itself. As a naturalist the merits of Dr. Barton are of no common kind; and he has deservedly received a large share of praise in his own and in foreign countries for his many and successful exertions in enlarging the sphere of natural knowledge. The design of the present work is in the highest degree commendable. From the importance of the subject on which it treats we could have wished that the language of Dr. Barton had been more precise, and for a practical work in medicine, that the facts which it contains had been more amply and more succinctly related.

ART. VII. AN ACCOUNT *of the* NEW-YORK HOSPITAL. New-York. Collins & Co. 8vo. pp. 65. 1811.

THE New-York Hospital, both with regard to the liberality of its foundation and the extent of its charity, may be pre-

nounced the most important institution of the kind established in this country: as a valuable auxiliary to the medical school of this city its benefits have been long felt and duly appreciated. In the present well-written pamphlet many interesting particulars are detailed concerning the first organization of the establishment and its present condition, together with its charter, by-laws, officers, &c. We make the following extracts for the purpose of diffusing more generally the information they contain.

"In the year 1770, a number of the most respectable and public spirited inhabitants of the city of New-York, subscribed considerable sums of money, for the purpose of erecting and establishing a public Hospital; and a petition was presented by PETER MIDDLETON, JOHN JONES, and SAMUEL BARD,* three eminent physicians, to *Lieutenant Governor* COLDEN, then commander in chief of the province of New-York, for a charter of incorporation, which was, in consequence, granted, the following year, by the Earl of DUNMORE, governor and commander in chief of the province.

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* From the following extract from a medical discourse, delivered by Dr. *Middleton*, in King's (now *Columbia*) College, on the 3d November, 1769, it appears that the first suggestion relating to the establishment of an Hospital was made by Dr. *Bard*. "The necessity and usefulness," says Dr. Middleton, "of a public infirmary, has been so warmly and pathetically set forth, in a discourse delivered by "Dr. *Samuel Bard*, at the commencement in May last, that his excellency Sir "*Henry Moore* immediately set on foot a subscription for that purpose, to which "himself and most of the gentlemen present liberally contributed. His Excellency also recommended it, in the most pressing manner, to the assembly of the province, as an object worthy of their attention; and the corporation of the city "have given assurances of granting a very valuable and commodious lot of ground "for erecting the building upon; so that there is now almost a certain prospect of "this benevolent and humane foundation soon taking place; and as it is to be on the "most catholic and unexceptionable plan, it is to be hoped, that it will meet with "the countenance and encouragement of every compassionate and good member "of society, whatever party or denomination he may choose to be distinguished "by, on other occasions."

"By this charter, dated the 13th July, 1776, the mayor, recorder, aldermen, and assistants, of the city of New-York, the rector of Trinity Church, the different ministers of the several other protestant churches, the president of King's (now Columbia) College, and the principal and most respectable inhabitants of the city, were named as members, and incorporated by the name of the "Society of the Hospital in the city of New-York, in America."* Twenty-six governors were also named, for the management of the affairs and business of the institution, who held their first meeting on the 25th July, 1771.

"Through the influence of Doctor *John Fothergill* and Sir *William Duncan*, considerable contributions were made to the society, by many inhabitants of the city of London, and other places in Great-Britain; and, in 1772, the legislature of the province of New-York granted an annual allowance of 800 pounds (2,000 dollars) in aid of the institution, for twenty years.

"In 1773, the governors of the hospital purchased of Mrs. *Barclay* and Mr. *Rutgers*, ground for the erection of a suitable edifice. A plan of a building having been procured by Dr. *Jones*, the foundation was laid the 27th July, 1773; but on the 28th February, 1775, when it was almost completed, the building accidentally took fire, and was nearly consumed.

"By this misfortune the society suffered a loss of seven thousand pounds; and the execution of their benevolent plan would have been wholly suspended, had not the legislature, in March, 1775, generously granted them the sum of four thousand pounds, towards rebuilding the house, and repairing the loss they had sustained. But the war between Great-Britain and the colonies, which took place in the same year, prevented the completion of the edifice. During the war, the house was occupied by the *British* and *Hessian* soldiers, as *barracks*, and occasionally, as an hospital.

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* By an act of the legislature, passed March 9th, 1810, the name of the corporation has been changed to that of "*The Society of the New-York Hospital.*"

"The effects of the war on the circumstances of our citizens, and the general derangement of affairs, prevented any attention to the institution; and it was not until the 3d January, 1791, that the house was in a proper condition to receive patients, when eighteen were admitted.

"The annuity granted by the provincial legislature ceased with the commencement of hostilities between Great-Britain and the colonies; but the legislature of the state, on the 1st March, 1788, directed eight hundred pounds, during four years, from the 1st February, 1788, to be paid to the hospital, out of the moneys arising from the *excise* in the city of *New-York.* And the legislature, by a subsequent act, passed the 11th April, 1792, for the better support of the hospital, granted two thousand pounds a year, for five years, payable out of the city excise.

"By an act passed the 31st March, 1795, the legislature repealed the act of the 11th April, 1792, as to future payments, and granted to the hospital four thousand pounds, annually, for five years, payable out of the duties on sales at public auction, in the city of New-York. An additional sum of one thousand pounds a year, for four years, was granted 11th April, 1796, payable out of the same fund. And on the 20th March, 1801, the annual allowance of 12,500 dollars was continued for five years, from 1st February, 1800.

"By an act passed the 30th March, 1797, for the establishment and support of a *Lazaretto*, the masters and wardens of the port of New-York were authorized to receive of the masters, officers, seamen, and passengers of every vessel entering the port of New-York, a certain sum for each person, which was directed to be paid to the commissioners of the health office, for the relief of sick seamen and foreigners admitted into the *Lazaretto;* and the surplus, if any, was directed to be paid to the governors of the hospital, for the relief of such seamen and foreigners as might be patients of the Hospital.

"By an act passed April 1, 1796, for regulating the port of New-York, the harbour-master was directed to pay certain fines therein mentioned to the treasurer of the New-York Hospital.

"By an arrangement between the treasury department of the United States and the hospital, made in 1799, the sick and disabled seamen at the port of New-York are received into the hospital, and enjoy all its advantages. The collector of the port, under the direction of the secretary of the treasury of the United States, pays, out of the hospital money collected and received by him, *three dollars* per week, for the board and maintenance of each seaman, including medicine and other charges.

"But the collector, since July, 1804, has refused to pay for more than 75 seamen, at any one time. The governors, however, considering every seaman who has paid hospital-money to the collector of the United States, as having a just claim on the government of the United States for hospital relief, have not hitherto refused admittance to seamen, beyond the number limited; trusting the justice of the national legislature, for remuneration of the sums expended, in the support of such seamen, beyond the amount received from the collector.* Without the aid which has thus been afforded to them, many of this useful and meritorious, though careless and improvident class of men, must have been abandoned, in disease and poverty, to the casual and precarious relief of common charity.

"In 1801, an agreement was made between the New-York Hospital and the governors of the Lying-in-Hospital, by which the existing funds of the latter were to be paid to the use of the former institution, on condition that a lying-in ward should be established: and a suitable ward for that purpose was accordingly fitted up and opened for the reception of patients.

"In consequence of the recommendation of the medical faculty of Columbia College, the governors of the hospital, in August, 1796, appropriated the sum of 500 dollars towards the purchase

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* The number of seamen who received the benefits of this institution, during the years 1806, 1807, 1808, 1809, and 1810, beyond the number limited by the collector, was 843. And the whole charge of their maintenance, at the rate of three dollars per week, during those five years, amounts to 9,500 dollars; for which sum nothing has yet been received by the hospital.

of a medical library; to which the members of that faculty contributed books from their private libraries, and part of their fees of public instruction. An hospital library was thus established, which was further augmented by the purchase of the medical library of Dr. *Romayne*, in 1800, and by the accession, in 1805, of a library of a private association of physicians, under the name of the Medical Society of New-York who gave their books on condition, that they and such of their sons, as should become practitioners of medicine in the city of New-York, should have free use of the hospital library. In 1805, the governors appropriated the sum of 250 dollars, for the purchase of books; and large additions have been made to it, by purchases and donations, from time to time: so that, including the valuable botanical library of Dr. *Hosack*, lately purchased, the hospital library now contains about 3,000 volumes, among which are some of the rarest and most valuable works in medical science.

"As there existed no institution in the state, for the reception and cure of lunatics, the governors were induced to appropriate apartments in the hospital for patients of that description; but as the building was not designed for that purpose, the accommodations were found to be extremely inconvenient and inadequate; and the applications for the admission of lunatics constantly increasing, it was resolved, in 1806, if the legislature would lend its aid for that purpose, by further contribution, or by giving greater permanence to the existing allowance, to erect a separate building, to be exclusively appropriated to the reception of that unfortunate class of persons.

"An application was accordingly made to the legislature, who passed an act, on the 14th March, 1806, continuing the annual provision for the hospital, payable out of the duties on sales at auction, in the city of New-York, until the year 1857. The governors immediately proceeded to lay the foundation of the proposed edifice, denominated the "Lunatic Asylum," which was completed, so as to be open for the reception of patients, on the 15th July, 1808, when nineteen were removed from the other building

and forty-eight more admitted, making in the whole sixty-seven. The whole cost of the asylum was about fifty-six thousand dollars.

"To complete the plan of the hospital, and render it more extensively useful, it is desirable that another building should be erected, on the northerly side of the ground, corresponding with the lunatic asylum, which, besides accommodating a greater number of patients, would furnish apartments for an anatomical museum, a more spacious theatre for surgical operations, and apartments for other useful objects, connected with the institution; but the execution of this design will depend on the increase of the funds of the hospital, which have been exhausted by the building of the asylum, and in necessary repairs and improvements. The governors, however, indulge the hope, that by the aid of the legislature, and private contributions, this part of their plan may yet be accomplished.

"To assist the governors to discharge the debts contracted in building the asylum, the legislature, by an act passed the 23d March, 1810, granted to the hospital the sum of 3,500 dollars per annum, for ten years, payable quarterly out of the duties on goods sold at auction in the city of New-York." p. 3—7.

"The whole number of patients admitted into the hospital from the year 1792, to 1810, inclusive, is 13,753; of these 9,227 have been cured; 886 relieved; 646 discharged, at the request of friends; 458 as disorderly; 187 sent to the alms-house; 517 eloped, and 1676 have died—266 patients remained in the hospital, at the end of the year 1810.

"From the 1st February, 1792, to 31st January, 1795, a period of three years, 1221 patients were admitted, and 1169 discharged. From the 31st January, 1795, to 31st December, 1803, a period of 9 years, 4,760 were admitted, and 4,744 discharged. From 31st December, 1803, to 31st December, 1810, a period of 7 years, 7,772 were admitted." p. 13.

ART. VIII. AMERICAN ORNITHOLOGY; *or the Natural History of the Birds of the United States: illustrated with plates, engraved and coloured from original drawings taken from Nature.* By ALEXANDER WILSON. Philadelphia. Inskeep & Bradford. Imperial 4to. vols. 5th, 6th, 7th, 8th, and 9th. About 120 pages each: 1812—14.

THE author of the American Ornithology having closed his earthly career before he finished that important work, the task of completing the 9th and last volume devolved upon his friend and executor Mr. George Ord, who has prefixed to it an interesting biography of Mr. Wilson. Having on former occasions noticed several of the volumes, it now remains for us to pay the last tribute of respect to a man whom we esteem, and to an author whose works will always occupy an important rank among the writings on Natural History.

The life of Mr. Wilson exhibits the complete triumph of genius over the want of education, and of persevering industry over the evils of poverty. Without any other reliance than on his own faculties, and with a force of exertion which nothing could check or retard, he has obtained a celebrity in science to which few men in this country can aspire, although many may be more highly favoured with the endowments of genius, and more extensively gifted with the advantages of early education and the bounties of fortune. The life of Wilson shows, conclusively, that the temple of fame is open to the most humble individual in the community, if he only attempts it with zeal and industry, and with a judicious selection of the part which he intends to act on the

theatre of the world: and it may not be amiss to add, in opposition to the complaints of his biographer, that notwithstanding he experienced, in some few instances, the slights of ignorance and the sneers of fastidious and factitious impertinence, yet that a liberal and enlightened community bore witness to his merits by a munificent subscription, which, after satisfying all expenses, would have placed him, if living, on the enviable ground of independence.

The science of Ornithology is involved in considerable difficulty and confusion. The arrangement of animals according to the principles of the Linnæan system, is an admirable contrivance to extricate the science of zoölogy from the darkness which surrounded it. The classes and orders of the great naturalist are arbitrary: the genera and species are natural; but when we consider that the general characters of birds are taken from the bill, tongue, nostrils, cere, caruncles, and other naked parts—and that the characters of the species are derived principally from the plumage and habitudes, we must be sensible that here is a wide field for a difference of opinion. Besides, the nomenclature adopted, in endeavouring to compress the descriptions of animals within the shortest compass, is frequently a mystery to most readers. Take, for instance, an account of a birdby Linnæus, Latham, or Pennant, and it will require considerable industry to penetrate the exact meaning of the author. The generic characters frequently run so closely into each other, that it is no easy task to make the appropriate arrangement. The plumage of birds varies according to seasons, to age, and to climate, and their manners assume a different appearance at different times and in different countries. The sexes exhibit almost invariably a diversity. The male is frequently smaller than the female, and is generally arrayed in a more beautiful dress. Genera are con-

founded together; varieties are represented as distinct species; the male is placed in a different species from his mate, and the same bird, at different ages and seasons, is considered a different species. The names of birds vary in different places.

In the same district of country the same bird frequently goes by different appellations, and the scientific name is also not uniform; Linnæus, Brisson, and Buffon, oftentimes disagree. We may add to this, the absurd custom adopted in this country of naming our birds after those in Europe, to which they are supposed to have some likeness, although in most respects they are dissimilar.

There are three modes in which we may obtain a knowledge of birds.—From personal observation of these animals in their natural state—from preserved subjects in cabinets of natural history—and from books. The first is undoubtedly preferable so far as it goes; but it is necessarily limited by our range of travelling. The second supplies this defect, but it is liable to this great objection; the subjects are often not only imperfectly prepared in the first instance, but generally decay and dissolve. In Cayenne, which has furnished more subjects for the cabinets of European naturalists than any other country, the birds are steeped in spirits for a long time, and dried by the heat of an oven. This must undoubtedly, in many instances, sully the glossy beauty of their plumage, and give them an appearance different from their natural one. Books must be resorted to in order to complete and extend our knowledge; but to place our sole reliance on them would be as absurd as to attempt to attain a knowledge of mankind by the meditations of contemplative retirement.

Our author has, with unparalleled industry and singular sagacity of observation, surmounted all the disadvantages which we have enumerated, and availed himself of all the sources of

information: every state in the union has witnessed his labours: on our Alpine hills—in our most distant forests—on the borders of our rivers and lakes—on the shores of the Atlantic, the footsteps of his enterprising industry may be seen. He first examined the feathered creation with his own eyes—he traced them in their most secluded haunts—he watched their migrations—he observed their seasons of song, and of love, and of incubation—he noticed their food, their instinct, and their habits.

After having explored this source of information, he next had recourse to cabinets of natural history, to the aviaries of amateurs, and to the observations of inquisitive and ingenious men. The museum of Peale furnished him with various and extensive knowledge; the methodical and comprehensive writings of Linnæus; the extensive information of Pennant, Brisson, Edwards, and Latham, and the splendid elucidations of Buffon, were also familiar to him.

Thus furnished with information, he has produced a work which excels all that precedes it, whether we have reference to the style and matter, or the drawings. It is in vain to attempt to form ideas from written descriptions of animals, sufficiently distinct, so as to distinguish them in all cases from each other: we must have recourse to the delineations of the pencil, and to the preservations of the museum. The number of species of birds has undoubtedly been greatly multiplied from the generality and confusion of descriptions: let the same bird be described after the Linnæan manner by two different persons, and it is an equal chance if they do not vary in some essential respects; but a faithful representation of the pencil will at once remove all ambiguity. The delineations of Wilson are done in such a masterly style that the bird is at once recognized. He also excels in his account of the manners of birds, and although he cannot boast

of the splendid eloquence of Buffon, yet there is such a fascination in his style, such a simplicity in his manner, and so much truth and nature in all his remarks, that we are compelled to give him the preference.

To form a just estimate of the extensiveness of this work, we have only to compare it with the celebrated natural history of Mark Catesby, published in 1754. Although the drawings of this writer are eminently beautiful, and generally correct, yet they are greatly inferior to those of Wilson. His descriptions also will not bear a comparison either in interest or extent: the whole number of birds which he describes amounts to 113, which contained all the land birds he saw in North America, between the 30th and 45th degrees of latitude. Wilson has figured and described 278 species, 56 of which were not known before: his untimely death has prevented the full execution of his plan. The swan, the turkey, and the crane, the most interesting of the feathered race, did not come under his review, a loss that cannot be supplied. With what interest would we read his remarks on the turkey? what light would he not have cast upon those controverted questions, whether the turkey is of exclusive American origin? and whether the domestic is a distinct species from the wild turkey? and whether, contrary to the general operation of cultivation and domestication upon animals and plants, this bird has dwindled in size, and sustained a deterioration by its domestic state?

Although Wilson has done much, yet much more remains to be done, in order to complete our ornithology. The whole number of species, according to Latham, is 3,000. Considering that the American republic, including our Louisiana acquisition, extends from the Atlantic to the Pacific; embraces the greatest and most spacious inland seas in the world, comprehends every variety of climate and soil, innu-

merable and boundless forests—prairies, or natural meadows, of several days' journey—deserts like those of Africa—mountains dividing the country into an eastern and western section—and rivers equalled in size by none in the old world: considering also its vicinity to numerous islands of a warm temperature, and the approximation of America to Europe and Asia, by which the land birds of the old world can have easy access to our continent; it is not unreasonable to suppose, that we may claim at least 1,000 species of birds, who either reside among us, or occasionally visit us. If this calculation be correct, what an extensive field yet remains for the ornithologist; and if another Wilson shall arise, endowed with genius and invincible industry, the rich treasures of natural science, which are now hidden from our view, will be drawn from the darkness which covers them, and exposed to the full view of an admiring world.

ART. IX. AN *Inaugural Dissertation on the* PATHOLOGY *of the* HUMAN FLUIDS. *Submitted to the public examination of the Trustees of the College of Physicians and Surgeons of the University of the State of New-York, Samuel Bard, M. D. President; for the degree of Doctor of Medicine, on the 4th of May,* 1813. *By* JACOB DYCKMAN, A. B. *Member of the Medical and Surgical Society of the University of the State of New-York.* New-York. Van Winkle & Wiley. 8vo. pp. 238. 1814.

FROM the author's preface it appears, that the present Dissertation was originally submitted, in manuscript, to the examination of the Trustees of the College of Physicians and Surgeons, in May 1813, for the purpose of receiving the honours of the medical doctorate in the University of New-

York. Believing the doctrines which he attempted to maintain to be founded on well-known physiological and pathological principles, and eminently calculated to advance the practical interests of the profession, he was afterwards induced to review his collegiate exercise, and to enter more fully into a defence of the tenets he had espoused. The present volume, therefore, though strictly speaking an inaugural exercise for a degree in medicine, may be considered as embracing opinions, the result of more mature deliberation than is usually found in performances of this kind. We have before remarked, that the statutes of the universities of this country did not exact from the graduate the publication of a Dissertation, and with deep regret do we state, that this system of discipline still exists. It nevertheless reflects much credit on the medical school of this state, that so large a number of their pupils voluntarily offer to the public, in a printed form, the evidence of their proficiency in medical science. If ever the universities of New-York, Philadelphia, Massachusetts, and Baltimore, are to attain to the reputation enjoyed by the institutions of a like nature in Edinburgh and Paris, it is incumbent on those who preside over the interests of our American seminaries, to enjoin regulations similar to those adopted with such success by the establishments in Europe. What is now a voluntary act on the part of students, ought to be made a prescribed and peremptory duty, and the publication of an inaugural dissertation, either in the Latin or English language, should, in every case, be an indispensable duty to be performed by candidates, previous to their being vested with medical honours. Among the improved regulations which it is hoped and believed will arise from the union of the medical schools of this state, there is none of more importance than the one now recommended. Let no exertion be spared to render that

profession learned and respectable, which, of all others, operates most extensively and most powerfully upon the interests of the community.

In the introduction to the present performance, Dr. Dyckman takes a cursory view of some of the principal theories which have prevailed among the ancients and the moderns concerning the pathology of diseases. The knowledge which the ancient physicians possessed of the nature of morbid affections was, in many instances, extremely limited, and frequently grossly erroneous: and notwithstanding the many advantages which the moderns possess, they are still greatly in the dark with regard to many of the most important phenomena accompanying disease. The two theories which have most extensively prevailed, are those embraced by the *humorists* and the *solidists*. The doctrines of the former were almost universally received, until the writings of Willis and Baglivi suggested the hint, that a consideration of the different conditions of the living solids would, in general, afford the most rational and satisfactory explanation of the various derangements of the system. To Hoffman, however, belongs the credit of having reduced this doctrine to any tolerably clear and simple form, and of pointing out its extensive application. The theories of Cullen, Brown, and Darwin, are properly considered by Dr. Dyckman as modifications of the doctrines of this justly celebrated systematic. The same, we think, may be said of the hypotheses of the late Dr. Rush.

In the opinion of Dr. Dyckman, the two opposite doctrines, that of the fluids and that of the solids, have both been carried too far by their respective advocates.

"While one party have supported one opinion, and the other the very reverse, the probability is, that no disease of the constitution can take place without involving every part of our sys-

tem, affecting the condition of the solids as well as that of the fluids. For such is the universal sympathy, and such the continual intercourse incessantly kept up between these component parts of our body, that in health they mutually assist and support each other, and are fitted by the laws of nature for the different purposes of the animal economy; in like manner, in the morbid state, they sympathize together, and reciprocally communicate their affections." p. 23—4.

The author justly considers the human body as an entire whole, whose various parts, though designed for many and different purposes, are yet subservient to each other, and in a perpetual state of action and re-action. Hence the truth of what has been so beautifully observed by Hippocrates. "Every thing in the human body," says this prince of medical philosophers, "is so disposed in manner of a circle, that you will find the end where you would look for the beginning, and the beginning where one might expect the end."

As all the animal motions are the result of the joint influence and coöperation of the different solids and fluids of the body, it is to the changes or disordered condition of either the one or the other, or both these, that we are to look for the cause of disease. The various affections of the living and inert solids, it is true, argues the author, will be found to be the cause of disease much more frequently than the various changes of the several animal fluids; but this, surely, he adds, is no good reason for rejecting altogether the agency of the latter, or for denying the possibility of a fault in the humours, or that they are capable of affecting, by their different condition, the motions or state of the living or inert solids. The blood may be considered the primitive principle of all animal substances, the common origin of all the animal solids and fluids: hence, when it is properly constituted, it is the source of health, and, on the

contrary, when it is vitiated, the cause of numerous morbid effects.

"That the blood," observes Dr. Dyckman, "and other humours of the body, are capable of admitting morbid or preternatural qualities, is a fact demonstrated by daily experience, and the uniform observations of physicians of every age and country. The colour, texture, consistence, and other sensible qualities of the blood, are liable to various alterations. Sometimes the humours appear to undergo decomposition in the body, as in *vitro*. In the scurvy, in putrid, malignant, pestilential fevers, &c. we observe all the phenomena of a degeneration and complete disunion of the different principles that compose the blood, the texture of which in some instances appears to be nearly destroyed. In such cases it seems as if the vital principle abandoned the government of the corporeal frame, and left the solids and fluids to the destructive action of external agents; in consequence of which they tend to putrefaction, and become decomposed, as they usually do when separated from the body, or when the principle of life or animality is extinguished. To ascertain these several morbid affections of the blood, with their various causes, signs, and effects, is the object of the following Dissertation. But in conformity with the generally received axiom, *Rectum est sui et obliqui*, before entering upon the consideration of the pathology or morbid state of this fluid, it will be necessary to offer a few observations on its natural history, and its appearance when in a sound condition; by comparing with which its qualities and accidents when diseased, it will not be difficult to refer the several vitiations to their proper heads or classes." p. 32—4.

Dr. Dyckman has arranged the subject matter of this volume under two general divisions; the first of which embraces the *morbid qualities of the fluids*. These may be comprised under three heads; *morbid fluidity*, *acrimony*, and *putrescency*. Previously, however, to entering upon the

consideration of these several subjects, he has thought proper to offer some observations on the natural history of the blood, as taken from sound persons. But we pass over this part of the exercise with remarking, that on this highly interesting physiological topic the author has evinced a large space of reading and minute observation, and that it affords the most satisfactory evidence of his extensive research into the writings of the ancients as well as the most recent authors; a circumstance, indeed, which is manifest in almost every page of his performance.

The author considers the morbid fluidity of the blood as arising from two causes, either from an excess, or defect of fluidity: the former vitiation he denominates *tenuity* and *resolution*, the latter *spissitude* and *viscidity*. The author devotes no less than thirty-six pages to an examination of the various causes which produce these different states of the fluids, and to a description of the various symptoms which denote their presence in the animal economy. In his investigation of this important subject, Dr. Dyckman has rendered the whole in an eminent degree subservient to the practical principles of medicine, and it were no difficult matter to select many parts as a proof of the justness of the opinion we have just pronounced of the merits of the work.

We are led in our progress to the section on the *morbid acrimonies of the blood*. It furnishes an elaborate and excellent view of the many causes which tend to produce an acrid condition of the vital fluid, and clearly and ably describes the pathological phenomena, originating from this source. Dr. Dyckman, adopting the opinion of the late Dr. M'Bride, considers the term *acrimony* as including all those noxious and morbific matters, which, being mixed with the blood, either destroy its healthy crasis, stimulate the living solids, or corrode the inert. Pathologists have gene-

rally divided acrids into *mechanical* and *chemical:* the author has confined his attention particularly to the latter. It was a remark of Gaubius, that these alone may so infect the fluids as to constitute a part of them.

"The sources of a morbid acrimony," says Dr. Dyckman, "are either *internal*, and derived from the spontaneous degeneration of the humours themselves; or *external*, and situated in the perpetual intercourse which the living human body holds with various external things; and thus the air, meat, drink, condiments, medicines, poisons, miasmata, and contagions, may introduce different acrimonies into the fluids in different ways, which being there evolved and corrupted by heat and motion, or excited into action by the vital power, induce itchings, pains, erosions, various kinds of eruptions, with irregularities in the animal motions, spasms, and many other perturbations of the functions. It is one of the laws of acrimony to act, or become more injurious to the body, in proportion as it is moved. Hence scorbutic persons are rendered most sensible of their pains upon motion or exercise of any kind; which accords with the well-known axiom, *acria nulla agunt, si non moveantur.*"* p. 95—6.

Among the principal sources of acrimony which are enumerated by Dr. Dyckman, the various kinds of food are noticed as at times producing this effect. By the continued use of vegetable aliment and acescent things an acid is generated in the stomach: digestion becomes impaired, and, as a consequence, debility follows: according to the author, this acid rarely if ever enters so largely into the circulation as to taint the mass of blood. "There is no trace of an acid," he continues, "in this humour, not even in the secreted fluids, if we except the ureal and arthritic concretions;

* De Gorter, Tract. de Perspir. cap. vii. § 3.

and of these, the latter only can be obscurely traced to a vegetable or acescent aliment. An acid, indeed, is a foreign body; for no animal humour, properly so called, ever appears to become acid of itself. Should any acid acrimony, therefore, ever actually be discovered to take place in the blood, its origin would seem to be owing to the aliment not being sufficiently changed by the vital powers."

The effects of a diet of animal food, continued for some time, are known strongly to incline the blood to a putrescent state: the experiments of Dr. Young might be adduced in proof of this fact. That accurate observer, Dr. Ferriar, has found many of his diabetic patients rendered scorbutic by an adherence to animal food, and the same occurrence has been witnessed by others. Dr. Dyckman has cited from the writings of Lind, Sinopæus, De Gorter, Percival, Holland, &c. many other instances of an alkalescent state of the circulating fluids, as the result of an improper use of animal matter. Upon the first establishment of the New-York State Prison, about 1797, before a regular system of internal management, with respect to the diet of the house, was adopted, an alarming scorbutic disorder made its appearance among the greater part of the prisoners in that institution. They had been confined to a diet almost exclusively of animal provisions, and it was only by the liberal use of recent vegetables that the progress of the disorder was checked, and the prisoners restored to health. The opinions contained in the following quotation are doubtless founded on correct reasoning.

"An acrimony is likewise generated when the body, in a sound state, is not duly supplied with the necessary nourishment; and that the sooner in proportion as the vital power is stronger. The animal humours, in consequence of continual heat and motion,

naturally and constantly tend to a state of acrimony and putrefaction. One of the principal means employed by nature to obviate this dangerous tendency, is the regular and daily supply which the system receives of fresh and nutritious aliment. For the office of the chyle is not only to afford nutriment to the different parts of the body, but also to temperate, dilute, and correct the blood itself. When, therefore, the blood is for some time deprived of the necessary refreshment of this demulcent liquor, it naturally grows more acrid and putrescent; to such a degree at least, as will be sufficient to render the whole mass, in a few days, unfit for any of the functions of life. In a person who has suffered hunger for a long time the blood and humours are attenuated, and rendered more acrimonious, by which they incline to putrefaction; and hence, all the secretions are rendered acrid and putrescent: what is expired from the lungs becomes so very fetid and disagreeable that the person is scarcely able to endure his own breath.* Those who die of famine have their blood and all the humours first rendered highly acrimonious,† which not only corrodes the delicate vessels, and sometimes induces hemorrhages and effusions of blood in different parts of the body, but so injures or almost destroys the tender fabric of the brain and cerebellum, as to produce intolerable pains, spasms, convulsions, acute fevers, attended with raging fury, and at length death itself."‡ p. 103—10.

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* Illis qui inediam patiuntur, et quorum sanguis novo affluente chylo non reficitur, sanguis per se interno calore dissolvitur et putrescit, hincque omnia, ex eo sanguine secreta, fœtent et acria sunt, halitus olet, saliva labia et linguam rodit, sudor ingratus est, bilis et cætera irritant, et ipsas partes solidas, in quibus hospitantur, destruunt; nisi enim opportune novo affluente latice chyloso restaurentur, totum corruit. Schwenke, *Hæmatolog.* p. 131.

† The blood of those who die of famine becomes highly acrimonious, which begets fevers, frenzy, and such a degree of putrefaction, as is utterly destructive of the vital principles. Huxham, *ut antea.*

‡ Ostendimus, etiam modico a jejunio fætere animam, etiam in purissimo feminæ corpore. Sic lac continuo rancescit, et urinæ intoleranda fit acrimonia. Sed diutius si inedia protracta fuerit, ab erosis ut videtur nervis, dolores non toleran-

Among other causes which are the source of acrimony in the body, the author mentions that the blandness of our fluids is destroyed both by an excess and by a want of motion in them. Irregularities in the functions of secretion and exertion, he states to be particularly favourable to the generation of acrimony: the same condition of our fluids is much facilitated by heat and motion. Hence, in the opinion of Dr. Dyckman, the great changes which the system undergoes in fevers.

Dr. Dyckman considers the *urine* and *insensible perspiration* both cutaneous and pulmonary, as the two principal evacuations which nature has instituted for the purpose of freeing the blood from noxious matters. It is peculiarly gratifying to notice the importance which the author attaches to these evacuations, as a means of preserving health and removing diseases. The matter of perspiration, which is not less an excrementitious discharge than that from the urinary organs, though considered by some late speculative writers of this country as perfectly bland and innoxious, is capable, when retained in the system, of effecting the most pernicious consequences. The history of febrile diseases has uniformly sanctioned this opinion; it is consonant to the experience of every unbiased observer, and the experiments of Sanctorius, Dodart, Kiel, De Gorter, Lining, Cruickshank, Home, Alexander, and Abernethy have placed this physiological fact beyond the reach of controversy. The remarks of Dr. Dyckman on this subject are the offspring of

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di nascuntur, et vasa rumpuntur, ut hæmorrhagiæ narium superveniant, et sanguis in ventriculum effusus visus sit, inque intestina. Celeriter etiam mens emovetur, et merositas primo atque mentis pene alienatio, et epilepsia, inde demum, delirium, deinde plenus furor superveniat, mortemque fere præcedat. Haller, *Elem. Physiol.* tom. vi. p. 167.

sober sense and judicious reflection, and recommend themselves to attention, both on account of their originality, and the practical instruction they impart. Did our limits permit we would readily transcribe them for the benefit of our readers.

Another condition of the blood, of a still more dangerous and complicated nature, takes place when this humour more immediately tends to dissolution and putrefaction. "Such, evidently, appears to be the case in some scorbutics, and likewise in putrid, malignant, and pestilential fevers." To the pathologist this section of the work, the subject of which the author has denominated the *dissolved and putrescent state of the blood*, will prove highly acceptable. With great modesty in the relation of his facts, Dr. D. manifests a thorough acquaintance with the nature of the principles he has laid down.

"The capacity of change in bodies is in a direct ratio with the multiplicity of their elements; so that the preservation or existence of an organized being after death is protracted so much the longer in proportion as its constituent principles are less numerous and volatile.* It is for this reason that the fluid and softer parts of our body putrefy more readily than the solids or firmer parts. Putrefaction, indeed, never takes place in those animal substances which contain only two or three ingredients, such as oils, resins, &c. but they must always be more complicated in their texture or composition.†

"But however complicated the animal substance, it does not putrefy without the presence of a certain degree of heat and moisture, which are the two great and essential requisites to pu-

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* Richerand, Elements of Physiology, p. 462.

† Thompson, System of Chemistry, vol. v. p. 770.

trefaction. Both of these requisites exist in the living system, and the former, too, according to the valuable experiments of Dr. Alexander, about that degree which is best calculated to promote the putrefaction of dead animal matter. This process also advances with greater rapidity in the open air; 'but exposure to air is not necessary, though it modifies the decomposition.' "* p. 134—5.

"When, in particular diseases, the animal fluids undergo certain changes, tending more or less to a state of putrefaction, this *tendency* to putridity ought not to be confounded with putridity itself. Such an *incipient* state of putrefaction in the humours will be more accurately expressed by the term *putrescent*, or *putrescency*, not as signifying a state of actual putridity, but a near approximation to such condition; that is, when the humours have so far degenerated, that they would undergo decomposition and putrefaction with greater ease and more facility than when in a sound and healthy condition." p. 141—2.

"With respect to the peculiar or actual condition of the blood in those diseases usually denominated putrid or malignant; though it can hardly be supposed, that a true and perfect putrefaction of this fluid, corrupting the whole mass, totally destroying its mixture, and resolving its component parts, can for the shortest time exist in the living body, it being repugnant to, and entirely incompatible with life; yet an approximation or rapid tendency to this state" "is compatible with life, though not with health, and evidently takes place in such diseases."

"This putrescency, or incipient putrefaction of the fluids in certain disorders, is evident, in the first place, from the appearances of the blood itself, when drawn from the vessels. The ingenious Dr. Milman, in his inquiry into the source whence the symptoms of the scurvy and of putrid fevers arise, very proper-

* Thompson, *ut supra*.

ly describes the effects of putridity on the blood: "If putridity," says he, "actually took place in the vital fluid, its effects would be to break down the texture of its parts, as it does that of every body; it must render it capable of coagulation."* Now, this is a condition of the vital fluid very similar to what physicians have noticed in certain diseases, particularly in putrid, malignant, and pestilential fevers;† in some scorbutics;‡ and in the putrid,§ or petechial fever‖ of small pox; in all of which the crasis of this fluid is much injured and dissolved. The consistence is very different from the ordinary appearance of healthy blood, its texture being so much weakened, or broken down, that either the coagulum is very loose, or it does not coagulate at all, or show any disposition to separate into crassamentum and serum as usual, but the whole remains quite fluid and dissolved. Huxham** assures us, that blood of this character always putrefies very soon." p. 145—7.

The symptoms which still further point out a putrescent state of the fluids are detailed in pages 147—52.

The causes of putrescency in the animal fluids are related with much perspicuity, and at considerable length. That acute and original observer, Dr. Fordyce, having no-

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* Milman, Inquiry, p. 55.

† In morbis putridis dissolutio cruoris quoque advertitur, præsertim pestis specie, in quibus non coagulatur sanguis, sed gangrænosus et putridus reperitur; quod post protractam inediam putridus et alcalinus factus est. Schwenke, *Hæmatolog.* p. 129.

‡ *Vide* Huxham, Essay on Fevers; Ibid. De Aere et Morb. Epidem.

§ Walker, on Small Pox, p. 109. &c.

‖ ——Nam in tanta pestilentia (scil. variolæ,) sanguinis crasis dissolvitur penitus, et maxime putrescunt humores; imo cruor emissus, putris instar saniei, diffluit; nec ut solito, in frigore coagulatur. Huxham, *De Aere et Morb. Epidem.* vol. 1. p. 103.

** Essay on Fevers, p. 42.

ticed, that putrid symptoms very generally appear in the advanced stage of all continued fevers, considered debility, or a depression of strength, as constituting the principal cause that determines the putrefactive tendency of the humours in fevers. But as depression of strength produces putrescency of the fluids, so also on the contrary, adds the author, this state of the system, in whatever manner produced, occasions depression of strength, and sometimes to a degree that proves fatal. An excess of motion may produce a putrescency of the animal fluids ; and many striking facts are given in the volume before us, in confirmation of this opinion. Putrid disorders may, therefore, be generated in the individual without the agency of miasmata, or any other cause *ab extra*.

Dr. Dyckman next remarks upon the influence of marsh miasmata, of the effects arising from decomposed matter and animal effluvia. Almost every writer, both ancient and modern, in enumerating the causes of putrid epidemics, has considered the effluvia emanating from putrid animal matter as one of the most common. Our author, in some degree, dissents from this opinion.

"It is probable, indeed," says Dr. Dyckman, "that this kind of matter may have sometimes produced such an effect, yet, if we were thoroughly to examine the subject, it would, perhaps, be found to be the case much less frequently than has been generally imagined, and then, too, chiefly in the more sultry and less ventilated parts of the globe. In our northern climate, as well as in most European countries, the atmosphere is so changeable, and so constantly agitated by frequent, and sometimes violent winds, that no kind of putrid exhalations can long enough remain stationary in the open air to be exalted to a degree of virulence capable of producing general infection, and much less of acquir-

ing a pestilential influence, before it is dispersed and swept away by violent or sudden gusts of wind. When, indeed, such exhalations are confined to a very limited space, and there concentrated and deprived of all chance of escaping, they may easily acquire a virulence capable of producing putrid and very fatal distempers, though they do not arise to the malignity of the true plague." p. 167—8.

The inference that may be drawn from the opinion just quoted, and from some others advanced in this Dissertation, is, that the diseases usually termed specific, such as plague, yellow fever, &c. owe their origin to a peculiar contagious matter; that the effluvium of putrid and decomposed animal and vegetable materials, is distinct from the subtle and noxious matter constituting a specific contagion. This doctrine, advanced by the author, is conformable to the experience and observation of many eminent practitioners, who have traced the origin, and noticed the character, of the yellow fever, as it has appeared in the different districts of the United States. After a most elaborate investigation, Dr. Chisholm is fully convinced, that the product of animal putrefaction never acquires a pestilential influence; and that it is under no circumstances adequate to the production of pestilence, or the true plague. But, admitting the truth of these opinions, the agency of animal putrefaction as the source of many malignant disorders, is amply proved by Forestus, Mead, Pringle, Lind, Blane, and others: its operation in augmenting the violence of specific diseases cannot but be familiar to every one acquainted with the progress of pestilential epidemics. Some pertinent reflections on this head are contained in pages 169—75.

Dr. Dyckman concludes this part of his exercise with a notice of certain changes which the atmosphere undergoes with regard to heat and cold, dryness and humidity. The

author has here also evinced his acquaintance with the observations of Hippocrates, and other of the ancient authors, and of the most eminent of those of late times.

From his examination of the nature of the material arising from the decomposition of animal, vegetable, and vegeto-animal matter, of their effects upon the atmosphere, of the different agents by which their deleterious powers are rendered less active or more virulent; and of the morbid phenomena they produce in the human system, Dr. Dyckman next enters upon the *action of specific morbid poisons*, as those of measles, small pox, &c. This highly interesting subject, which has been so much controverted, is ably treated by the author, and is one of the most satisfactory portions of his work. He is fully convinced that the changes which arise from the introduction of the matter of specific diseases in the human constitution, depend upon the *assimilatory* or *fermentative* process.

The second general division of the present Dissertation treats of the *morbid quantity of the fluids*. The circulating fluids in the human body may become the source of disease either through *excess*, or *deficiency*, in quantity; which different states constitute the πολυχυμια and ολιγοχυμια of pathologists. The second condition of the fluids very seldom takes place; the first, an *excess* in quantity, which is usually called *plethora*, is of frequent occurrence, and has accordingly received due attention from the author.

Pathologists have enumerated different species of plethora; among the ancients, as we are informed by Galen, Paulus, and Avicenna, and as is stated by Dr. D., plethora was divided into two kinds: "of these," adds Dr. D. "one relates to the vessels, and was denominated a *plethora ad vasa*, and sometimes *ad molem*, or *ad venas*: the other has a reference to the strength of the natural powers, and was called a *plethora ad vires*. The former is always, and properly, a

true or absolute fulness; but the latter is so relatively with respect to the natural powers only. Physicians have mentioned two other kinds of plethora, viz. a *plethora ad spatium*, and a *plethora ad volumen.*"

The author having with much perspicuity characterized these different sorts of plethora, which have generally been noticed in the schools, next details the various circumstances which are more especially calculated to produce such a state of the blood-vessels, particularly in advanced life. The plethora so frequently the attendant on old age also receives proper notice: the common, though palpable error, that evacuations by the lancet are improper in advanced life, is shown by our author to lead to serious results in the management of disease; and the timid practice which is generally adopted by those who are the advocates of this doctrine, is reprobated with becoming severity. The weapons with which Dr. D. here so successfully contends, are those which may always be readily and liberally furnished by the observing and experienced physician. The dreadful effects which a large majority of the medical men of this city entertain of the use of the lancet in old age, has been repeatedly taken notice of in the different quarterly reports on the diseases of New-York, as published in the Register; and to these reports Dr. D. has made frequent reference.—The whole section on plethora is eminently deserving of commendation.

"The body in advanced life is less fitted for motion or active exercise; whence the excretions must be more slow and inconsiderable, and cannot bear a due proportion to the *ingesta*. And as little blood is consumed by heat, motion, and nutrition, there must necessarily be produced a superabundance of fluids, and a plenitude, or overloaded state of the vessels; which, unless seasonably and occasionally removed by the use of the lancet, or some salu-

tary effort of nature itself, will frequently lay the foundation for many of the complaints incident to advanced life; such as giddiness, apoplexy, palsy, numbness of the extremities, gout, hemorrhoids, dropsical effusions, coughs, difficulty of breathing, hydrothorax, angina pectoris, visceral obstructions, itchings, or erysipelatous eruptions, calcarious concretions, affections of the urinary organs, pains in the joints, &c. which often arise from, or are connected with, a plethoric state of the system." p. 212.

Among other diseases which arise from, or are more immediately connected with, a morbid fulness of the blood-vessels, Dr. Dyckman dwells particularly upon gout, angina pectoris, and the different kinds of dropsies. Our opinion concerning the nature of gout has already been stated on a former occasion in this work;* and the arguments which we then offered were such as to convince us, that this disease derives most of its characteristics from plethora. The same, we think, may be said of angina pectoris:† with regard to dropsy it may be confidently asserted, that, in a great majority of instances, it arises from a morbid fulness of the sanguiferous system; that it more generally depends upon an increased excitement, than diminished absorption. We refer to the volume before us for many interesting facts, and much reasoning on these different subjects: the pathological knowledge which has been derived from the latest investigations into the nature of these three diseases, places this view of their character in a very striking light.

From the brief analysis which we have attempted to give of the present volume, the reader will be enabled to form some idea of its nature and importance. The principles which the author has laid down are demonstrated to be well

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* Register, vol. iv. p. 426.

† See Review of Dr. Bogart's Dissertation, vol. iv. p. 274.

founded, and the most ample confirmation is afforded of the utility and success of the system of practice which he inculcates. His remarks evince sagacity of observation, and exhibit a favourable specimen of inductive reasoning; his pathological information, with regard to the immediate subject of the work, is extensive and profound: his materials, though in not a few instances derived from his own experience, are for the most part selected, with great care, from the labours of the most eminent of ancient and modern authorities; and are disposed of in a judicious and satisfactory manner. His style is uniformly dignified and perspicuous, and his descriptions free from expressions that can give offence to the most fastidious reader.

ART. X. A NEW AND COMPLETE AMERICAN MEDICAL FAMILY HERBAL, *&c. &c. &c.* *By* SAMUEL HENRY, *Botanist.* New-York. Large 8vo. pp. 393. 1814.

WE are told, in the title page of this treatise, that it is "*the result of more than thirty years' experienced practice of the author among the Creek Indians.*" From this circumstance alone, we had reason to expect some valuable discoveries in the healing art. It has long been a received opinion, that the Indian natives are well acquainted with the medical virtues of many indigenous plants of which the descendants of European parents are perfectly ignorant. The want of letters among the aborigines must have prevented them from preserving, as the Grecians formerly did, a faithful record of their discoveries, from age to age; but the present generation of Indians are, nevertheless, greatly indebted to tradition for their knowledge of the virtues of American herbs. For this reason we had much to expect from the

thirty years' *experienced practice* of a *botanist* and *practitioner in physic.*

The ancient custom of sending a book into the world, with three or four introductory eulogies in prose or verse, has been pretty much neglected from the time in which professed reviewers became numerous; and the late practice, we think, is rather the better, because it may be presumed that a gentleman who carefully reads the printed copy of any work, is better qualified to speak of its merits than one who never looked at the manuscript. We speak of this return to an old custom, because we are not clear that Mr. Henry has done it with propriety. He recommends his work by publishing the "*testimonials of the estimation in which it is held by some of the most distinguished gentlemen of medical science.*"* Now the precedent, as we think, is somewhat dangerous; for though it may have happened that some distinguished medical gentlemen had such confidence in his learning, talents, and integrity, as to patronise his book without reading it, and to risk the health or the lives of their fellow-citizens by the sanction of their names, the cases are few indeed in which the same thing can prudently be repeated.

Be this as it may, we have read the book with some attention, and we do not hesitate to speak of it as a work that is perfectly unique. It does not resemble any botanical or medical work that we have ever seen: true it is, that some publications are occasionally made in London, which are nearly in the same manner, but they are greatly inferior to this in size and weight. We do not pretend to have made any experiments on the efficacy of a single receipt that is found in

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* The Hon. Samuel L. Mitchill, M. D. &c. &c. James Tillary, President of the Medical Society of the county of New-York, and Samuel Thompson, Professor in Massachusetts!!!

this book: but if the author is not mistaken, he has gone far towards removing the opprobrium medicorum. He has discovered infallible cures for some diseases that have usually been counted incurable. Some of our readers, who travel through the parlour in go-carts, may be rejoiced to hear of an infallible cure for the gout: and many others will be glad to hear, that Mr. Henry, the botanist, has discovered cures, most of them infallible, for the *king's evil*, the *dropsy*, *consumption*, *chronic rheumatism*, the *cancer*, *fistula in ano*, *worms*, *jaundice*, *epileptic fits*, *gravel*, and *deafness !!*

Although the work is called the *American Herbal*, the reader is not to suppose that all the plants described in this book, about one hundred and fifty, are peculiar to America. The oak, juniper, and peach, are found in other countries, and so are flax, oats, senna, hops, and a hundred other plants therein recommended.

As this work is purely American, and will probably cross the ocean as soon as we have peace, we consider it our duty, as Americans, to bespeak the candour of the London and Edinburgh reviewers. If they find any deviations in particular words, or in the general construction of a sentence, let them not charge the nation in general with ignorance of our language: as when they accuse us with the southern provincialism *toat* instead of carry, or the eastern word *improve* instead of occupy.

We have seen more instances than one of an English author making an apology for the style in which he wrote, because he had resided too long in a foreign country. The critic is bound to give the same indulgence to an American writer that is claimed by his fellow subjects; he must admit that a residence of thirty years among a savage nation, of a strange language, must have altered the style of our botanist. The critic will also recollect, that the occasional introduction of French words or sentences into English compositions is quite fashionable, at present, in England, as the

English language is not sufficiently expressive. Our botanist has faithfully imitated this example; but he introduces words of the Creek language, instead of the French. Thus in his *medical secret* No. 9, he recommends a certain ointment that may be of great use to a man who understands the *juvansia*, and *ledensia*. These words being in the *Creek* language, lead us to believe, that a man should be master of that tongue, in order to make a proper use of his cancer ointment. In the beginning of his appendix, Mr. Henry gives us to understand that he has executed *multum in parvum*. This being another specimen of the Creek language, very naturally excites an inquiry concerning the Creek nation, whether they are not the real descendants of the Welch colony that migrated to North America, some hundred years ago? That such is the fact we shall readily believe, provided it can be established, that Wales was originally settled by a colony from the banks of the river Tiber; for the Creeks seem to imitate the ancient language of Rome, quite as much as the present Italians do.

The British critic may possibly be surprised at the remarkable hostility that exists, in many cases, between the nominative and its verb, in the compositions of our botanist. Thus he tells us, that he writes in a plain, familiar style, that his book may be understood by *all who reads:* it is, however, to be presumed, that this coupling of a plural and singular number together is in common use in the Creek nation.

Mr. Henry seems to value himself much more upon the excellence of his numerous receipts for curing diseases, than upon his descriptions of the several plants. Most of the plants had formerly been described by other writers, but the receipts are of his own invention: some of them, as he says, are worth forty or fifty dollars, and some of them are worth hundreds. They have long been secrets confined to his own bosom, but now made public for the benefit of his

subscribers, and the good of mankind. It is amusing to observe how his prescriptions are fitted to patients of different tempers: thus he gives two receipts for curing a felon, or a painful swelling in the finger. One of the receipts will perform the cure in an hour, but the other receipt, for the accommodation of people who are in love with pain, may remove the complaint in ten or twelve days. As we have not, as above stated, tried the efficacy of a single receipt of the fifty-six that are given, we do not vouch for their infallibility; but as the reader may wish to see one or two of them as samples, we shall give them two receipts for the cure of deafness.

1. "Roast a beaver's tail before the fire, and let the pa-
"tient drop seven drops of the oil, as hot as he can bear, in-
"to the ear every night and morning, stopping the ear with
"wool."

If the patient could persuade a friend to drop the oil into his ear, perhaps it might be quite as curative.

2. "Heat a knitting kneedle red hot, and hold it over the
"patient's ear, and drop a little of the urine of a pole-cat on
"the hot needle, so that seven drops fall into the ear every
"night and morning, and stop the ear with wool until he has
"recovered his hearing."

Our readers, in general, know with how much ease the articles here mentioned may be obtained, and how pleasant the odour would be. Perhaps some of them would prefer the disease to the remedy; however this may be, we confess that we cannot discover what is the rule by which Beavers and Pole-cats are classed under the head of American Plants.

But badinage aside. Seriously do we regret the appearance of the present performance. A more gross imposition upon the community, than is exhibited by the publication before us, has not come within our knowledge.

ART. XI. PHARMACOEPIA CHIRURGICA *in Usum Nosocomii Novi Eboracensis.* By VALENTINE SEAMAN. M. D. *Lecturer on Clinical Surgery in the New-York Hospital, &c.* New-York. 12mo. pp. 47. 1811.

IT must, long ere this, have been observed by our readers, that the Review department of the Register is conducted rather upon the principle of selection than that of general notice. We have taken this occasion to remind our friends of this circumstance in answer to the repeated solicitations that have been made to us to offer a review of the above pamphlet. If any consideration could induce us to violate our general plan, it must be in cases of the nature of that now before us; when dulness and incompetence, led on by the instigation of vanity, are induced to usurp the prerogatives which exclusively belong to genius and ability, to assume first, the dignified station of teacher, and next the still more commanding rank of author. In such cases there is indeed room for animadversion, and when we consider the pernicious consequences which must unavoidably result from a book of the character of that we have just mentioned, we know there is ample employment for all the severity of criticism. Until at this time we could not have supposed there was any man, having the least regard for his profession, who would have offered to the public a work so destitute of merit and so abounding in errors; errors in language,* for which, had they been committed by the dullest tyro, of three months standing at a grammar school, he would have received

* See the name of the work which we have copied *literatim* from the title page

the severest flagellation from the most lenient pedagogue; errors in science of which we could not suppose any man who had ever received the degree of *medicinæ doctor* to have been guilty.

In justice to the enlightened board of governors who direct, with so much honour to themselves, and with such great advantage to the community, the concerns of the New-York Hospital, it is proper to state, that this publication, purporting to be a Pharmacopœia of that Institution, never, we believe, received the sanction of their approbation; and as far as we have learned, a very different manual of Pharmacy is in use in that excellent establishment.

DOMESTIC INTELLIGENCE.

College *of* Physicians *and* Surgeons *of the* University *of the State of* New-York.

The arrangement agreed on between the Professors of the College of Physicians and Surgeons of the City of New-York, and the Faculty of Physic of Columbia College, having been approved by the Trustees of the respective institutions, was confirmed by the Honourable the Regents of the University, at their meeting held on the 7th of March, 1814. A union of the Medical Schools of New-York being thus happily and honourably effected, this Medical establishment is placed on the most permanent foundation, and, aided by the patronage of the Legislature, affords the most ample system of Education in the several branches of Medical Science.

Officers &c. *of the* College *of* Physicians *and* Surgeons *of the* University *of the State of New-York, upon the Union of the two Medical Schools in* 1814.

Samuel Bard, M. D. *President.*

Benjamin De Witt, M. D. *Vice President, and Professor of Natural Philosophy.*

John Augustine Smith, M. D. *and* Wright Post, Esq. *Joint Professors of Anatomy, Physiology, and Surgery.*

David Hosack, M. D. *Professor of the Theory and Practice of Physic, and Clinical Medicine.*

William James M'Neven, M. D. *Professor of Chemistry.*

William Hamersley, M. D. *Professor of the Clinical Practice of Medicine.*

Samuel L. Mitchill, M. D. *Professor of Natural History.*

JOHN C. OSBORN, M. D. *Professor of Midwifery, and the Diseases of Women and Children.*

JAMES S. STRINGHAM, M. D. *Professor of Medical Jurisprudence.*

VALENTINE MOTT, M. D. *Professor of the Principles and Practice of Surgery.*

JOHN W. FRANCIS, M. D. *Professor of Materia Medica.*

TRUSTEES.

Samuel Bard,
Benjamin De Witt,
John Augustine Smith,
David Hosack,
Wright Post,
William James M'Neven,
Samuel L. Mitchill,
Hugh Williamson,
William Hamersley,
John D. Jaques,
Thomas Addis Emmet,
John C. Osborn,
James S. Stringham,
John W. Francis,
Valentine Mott,
Joseph Bloodgood,
Andrew Morton.

John D. Jaques, *Treasurer.*
John W. Francis, *Registrar.*

ADDITIONAL *Notice of the* LECTURES *delivered in the* COLLEGE *of* PHYSICIANS *and* SURGEONS, *New-York.*

[A syllabus of the several courses of Lectures delivered in the University of the State of New-York, accompanied the Historical Sketch of the College of Physicians and Surgeons, published in the Register, for July last. For the purpose of rendering more satisfactory the account of the system of the medical institution now provided for in this University, the present additional notice of other courses of Lectures is inserted.]

ANATOMY, SURGERY, AND PHYSIOLOGY.

THE Lectures on *Anatomy, Physiology*, and *Surgery*, are delivered by PROFESSOR WRIGHT POST, M. D. The anatomical course commences with the history of anatomy, from the earliest ages to the present period; after which the first object is to

take a general view of the principal parts of which the body is composed, endeavouring to explain the use of each, and manner of connexion, so as to give a general idea of the animal economy. The professor then proceeds to investigate, with the greatest possible accuracy, the more particular branches of anatomy, by first unfolding the structure of the different organs, and afterwards explaining their functions. In prosecuting this inquiry, the body is divided into the following systems: 1. Osseous, 2. Muscular, 3. Chylopoietic, 4. Vascular, 5. Secretory, 6. Nervous, 7. Respiratory, 8. Connecting and communicating, 9. Defensive, 10. Genital. Under one or other of these heads any part of the human body may be arranged; and this division is preferred to that in more common use, as being equally expressive and more comprehensive.

Having explained the structure and functions of the different organs in their natural state, an attempt is made to give a correct idea of the changes which they undergo by disease. In this investigation, it is not considered sufficient barely to mention and exhibit the appearances which manifest themselves upon dissection, and to explain the manner of their production, which, strictly speaking, would be all that *pathology* implies, but also to point out the symptoms which characterize each individual disease, and to recommend such treatment as, from experience, has been found most beneficial.

The Professor of Anatomy will further, on all occasions, keep in view the application of Anatomy to Surgery. This will lead him frequently to make observations on Surgery; and as the importance of the subject demands it, so it will be his particular aim to show where the skill of the surgeon and the success of his practice will depend upon an accurate knowledge of anatomy.

It may not be uninteresting to those who wish to be informed of all the advantages which the School of Anatomy in the College of Physicians and Surgeons affords, to state, that a very extensive collection of anatomical preparations is added to the College; in which the intimate structure of all the important organs in the body is made so conspicuous, that where description fails

to give clear concepti ns, the eye may convey to the mind a just and accurate knowledge.

The Lectures on Anatomy, &c. are delivered *daily* throughout the session.

OBSTETRICS AND THE DISEASES OF WOMEN AND CHILDREN.

The Lectures on *Obstetrics* and the *Diseases* of *Women* and *Children*, are delivered by PROFESSOR JOHN C. OSBORNE, M. D. This course commences with a brief history of the progress of this branch of medicine from the earliest ages to the present time. The sexual characteristics of the female constitution are examined and described. The difference in the anatomical structure of the male and female body will include a minute description of the structure and functions of the organs of generation of the latter: in describing these functions the theories of generation and menstruation are particularly attended to. The diseases of these organs, and the suspended or irregular exercise of their functions are particularly described, and the modes of treatment for their relief copiously narrated.

The opinions of philosophers and physicians on the nature of conception, and the agency of either party in producing it, is followed by a description of the symptoms indicating its existence, and the complaints incident to the pregnant state, and the modes of relieving them.

The period of utero-gestation and the symptoms of labour; the various species of labour, natural, laborious, preternatural, and complicated, are described, and the modes of affording assistance are exemplified on the machine. To this succeeds the treatment of the parturient patient and the infant: the various diseases of infancy are particularly attended to.

These lectures are delivered *twice a week*, and practical illustrations given at the lying-in ward of the hospital, of such important cases as may occur during the course.

CLINICAL PRACTICE OF MEDICINE.

The Professorship of the *Clinical Practice* of *Medicine* is held by WILLIAM HAMERSLEY, M. D. In this course of lec-

tures are delivered the general principles of the practice of physic, illustrated by the Clinical practice of the New-York Hospital. The importance of this course needs no elucidation. A regular record of all the important cases is taken, to which students have access, and may copy at their pleasure.

THE PRINCIPLES AND PRACTICE OF SURGERY.

The Lectures on the *Principles* and *Practice* of *Surgery*, are delivered by PROFESSOR VALENTINE MOTT, M. D. The course is arranged under two heads: 1st. Operative surgery —2d. Medical surgery. The first comprehends the various operations and accidents to which the body is liable, and the second the numerous diseases which fall under the notice and care of a surgeon.

The following subjects are treated of in the operative part of the course:

Irritation and sympathy, and the influence of the mind upon the body, as they apply to surgery.

Inflammation, and its consequences.

Injuries of the head; divided into external, or affections of the integuments; and internal, or concussion and compression, and fungus cerebri. Operation.

Aneurisms, with the general doctrine; divided into external and internal. External, as popliteal, inguinal, carotid, subclavian, &c. Internal, aorta, &c.; varicose and aneurism from anastomosis; aneurism of the extreme arteries. Operations.

Hydrocele. Its various kinds; affects other parts of the body than the scrotum; spina bifida, &c.

Diseases of the testicles. Hydatid, scirrhus, scrophulous, pulpy, and fungus testicle; castration, sarcocele, sclerocele, varicocele, hæmatocele, &c.

Diseases of the breasts. Hydatid, scirrhus, pulpy or soft cancer, fungus hæmatodes, and steatomatous tumour. Operation. Painful tumour in young females.

Retention and suppression of urine. Difference; causes; operations for retention; opening into the urethra; treatment of suppression.

Diseases of the eyes. Ophthalmia; cataract; various kinds; operations; extraction; depression; anterior operation of Saunders; Dr. Adams' operation; artificial pupil; staphyloma; hydrophthalmia; carcinoma; extirpation; amaurosis.

Fistula lachrymalis. Nature; treatment; operation.

Polypi in the nose, throat, &c. Treatment.

Removal of the tonsil gland.

Dropsy of the abdomen. Different kinds; paracentesis.

Fistula in ano. Nature and treatment.

Piles and excrescences. Treatment.

Amputations. These are shown upon the recent subject, with all their varieties.

Amputation, and cancer of the penis.

Tic douloureux. Its nature; medical treatment; operation upon the different nerves.

Bronchotomy. In suspended respiration in drowning and hanging; for noxious airs; tumour pressing on the trachea; extraneous substances in the trachea, &c. Different modes of operating.

Lithotomy in men. Calculi found in five different parts of the urinary organs. Different kinds of calculi; chemical composition. Various modes of performing the lateral operation.

Lithotomy in women.

Hernia. The new anatomy demonstrated, and the varieties of hernia extensively described.

Fractures. Generally and particularly.

Sprains. Nature and treatment.

Dislocations. These are particularly described. Under this head are considered ganglia, abscesses in the thecæ of the fingers, loose cartilages in the knee joint, dropsical collections of synovia, in the knee joint, bursa between the patella and tibia, under the rectus tendon, &c.

This comprises the subjects to be treated of in the operative part of the course, though the order will be changed as the teacher may deem proper for the benefit of the class, and the best use of the materials on hand.

The second division of the course, or the diseases of surgery, commences with the most common of all, to wit:

Gonorrhœa. Its consequence, as strictures, fistula in perineo, enlargement of the prostrate gland, irrritability of the bladder, palsy of the bladder, chordee, hermorrhages from the urethra, sympathetic buboes, inflamed testicles, gleet. External gonorrhœa, gonorrhœal ophthalmia and rheumatism; impotence. Gonorrhœa in women; gleet.

Chancre. Its consequences, phymosis, paraphymosis, mortification of the penis, sloughing of the urethra, bubo, sore throat, eruptions, phagedenic ulcer, bones of the nose diseased, nodes, bones of the cranium diseased, chancres in women.

Warts and anomalous affections.

General observations on the venereal disease, and on the action of mercury. Gonorrhœa and chancre not produced by the same poison; experiments which prove it.

Erythema Mercuriale, or hydrargyria. Nature, treatment.

Scrophula. Disease of the lymphatic glands, tabes mesenterica, white swelling, disease of the hip joint, of the spine, psoas and lumbar abscesses, scrophulous disease of the testicles and ophthalmia, purulent eye.

Diseases of the bones. Caries, necrosis, spina ventosa.

Cancer. Its consequences and treatment.

Wounds. Incised, lacerated, contused, and punctured. Tetanus, &c. Wounds of arteries, veins, nerves, tendons, abdomen, stomach, intestines, &c. Chest, throat, and joints.

Gun shot wounds. Arteries, chest, abdomen, &c.

Frost-bitten limbs.

Burns and scalds.

Tumours. Adipose, or steatomatous; encysted, lymphatic glandular, fungus hæmatodes, hydatid, cutaneous, medullary, exostosis, nevi materni, bursæ muscosæ, and bronchocele.

Bandages. Application and use.

Poisons. Animal, vegetable, mineral, and morbid.

Dr Mott will perform all the various operations upon the dead body before the class, and enable such gentlemen as wish to

operate themselves, to perform them under his immediate direction. Those parts of the course which are most important to the military and naval surgeon, will claim particular attention.

The lectures are continued *daily* throughout the session.

MATERIA MEDICA.

The Professorship of the Materia Medica is held by JOHN W. FRANCIS, M. D. The Materia Medica embracing, in its fullest signification, all those substances which are employed, either in a simple or combined state, for the cure of diseases, the professor of this department of medical science arranges the various subjects of the course under two general divisions, *aliments* and *medicines*. Under the former head are included all those substances had recourse to as articles of nutrition, and which are more especially calculated either for augmenting the body or repairing its continual waste. The nature of the principal alimentary substances is examined, and their effects upon the constitution are considered: the importance of a due regard to diet and regimen both in health and disease is here also pointed out. This view of aliments serves, therefore, as an introduction to the various objects embraced in the second part of the course.

The second division, that *of medicines*, comprehends all those substances whose operation is particularly adapted to excite such changes in the system as are calculated for the removal or alteration of its *morbid* state.

The subjects of inquiry which claim attention when considering the articles of the materia medica being properly comprised under three heads, that of natural history, of chemical and pharmaceutical history, and of medical history, the utility of a knowledge of remedies according to this three-fold view is shown, and its practical importance enforced.

A concise account is next given of the different systems of classification of the articles of the materia medica that have been projected. Having unfolded the principles upon which both the older writers and the more modern proceeded in establishing their

respective methods of arrangement, and endeavoured to show that the errors of the former are to be attributed chiefly to their philosophy, too little observant of facts, and too prone to hypothesis; and that the defects in the systems of classification adopted by the latter have their origin principally in the very nature of medical science, which arrives to perfection only by the accumulated observation of ages, the learner is next taught to consider the operation and effects of remedies as affording the only accurate and certain knowledge of their medicinal powers. The classification of the articles of the materia medica adopted in this university, is, therefore, founded on a knowledge of the effects of remedies on the human constitution. But while a due regard is, in this respect, paid to every substance that comes under notice, an attempt is at the same time made to form and preserve an association between the active properties and virtues of remedies, and the nature and seat of the various diseases in which they may be employed: such an association cannot fail to prove in an eminent degree useful, inasmuch as an intimate connexion is thence formed between the general indications of cure, and the means by which they are fulfilled; the peculiar character and type of disease may suggest to the mind the proper remedy for its removal; and vice versa, the nature and qualities of medicines will associate with themselves the diseases and condition of the system in which they are indicated.

The better to understand the particular characters of the several classes into which remedies may be divided, the professor of the materia medica considers the human body as made up of four distinct parts; each, however, to a certain degree connected with the other, and reciprocally affected by similar causes. These parts are,

1. The brain and nervous system;
2. The heart and blood-vessels;
3. The absorbing, secreting, and excreting system; and
4. The various fluids of the body.

In correspondence with this view of the human structure,

therefore, Dr. FRANCIS distributes the various articles entering into the materia medica into *four* classes.

1. Those remedies whose operation is chiefly confined to the *nervous system*, and which for the most part exhaust themselves in their operation upon that part of our frame. Under this head is arranged,

A.—STIMULANTS, embracing the *diffusible stimuli* or *excitants;* and the *permanent stimuli* or *tonics*, including *bitters* and *astringents.*

B.—SEDATIVES, containing *narcotics* and *antispasmodics.*

2. In the second class of remedies are associated those which particularly operate upon the *heart and blood-vessels*, diminishing the quantity and the momentum of the circulating mass of fluids. Under this head is considered,

BLOODLETTING, both *general* and *local;* and the various means employed for that purpose.

3. In the third class of remedies are arranged all those substances which act upon the secretions and excretions of the system. Such are *emetics, cathartics, sudorifics, expectorants, diuretics, and emmenagogues.*

4. The fourth class embraces those remedies which are employed for the purpose of correcting any *vitiation* or *morbid* condition which may exist in the various fluids of the body. This class contains *antiseptics* and *lithontriptics.*

With regard to the manner in which each article of the materia medica is treated: having considered the character of any class of remedies, the various substances proper for that class are associated together. If the substance be a vegetable, the generic and trivial name of LINNÆUS is first given; then the class and order to which it belongs in the sexual system; next the natural order, as improved by MURRAY in his Apparatus Medicaminum; the country of which it is a native, its different places of growth, the officinal name, the vulgar name, and the part or parts of the plant employed in medicine, are severally stated. Its action on the body is next considered, and, as far as facts warrant the manner of its operation, explained. The diseases in which it is service-

able are next pointed out; the dose and form in which it is prescribed; the auxiliaries with which it may be joined; the pharmaceutical preparations and compositions; and, lastly, references are made to the most useful authors who have written on the subject under notice.

Concerning the resources of this country: as no region of the earth is more fertile, and more valuable for the productions of its vegetable and mineral kingdoms, the teacher endeavours to communicate, so far as it regards the materia medica of the United States, all the information essential to this object. In doing this he avails himself of the physical investigations of Mitchill, Bartram, Volney, Kalm, Muhlenburg, Belknap, Cutler, Williams, the Michaux, Pike, Stoddard, Brackenridge; Schoepf, Barton, and others.

As far as practicable, specimens are exhibited of all the various substances as found in their native state, and of their different officinal preparations.

The Lectures on the Materia Medica are delivered *three* times a week during the session.

MEDICAL JURISPRUDENCE.

The Lectures on Medical Jurisprudence are delivered by PROFESSOR JAMES S. STRINGHAM, M. D. The different subjects to be comprehended in this course are as follows:

1. Some general observations relative to the various divisions of age which have been proposed. Nævæ maternæ particularly considered.

2. The question examined, as to the propriety of extracting a fœtus from the uterus of the mother, who may have died during parturition, and what are the appearances by which we can positively decide as to the actual death of the mother.

3. Virginity; under which head are included observations relative to rape and the crime of sodomy.

4. Concealed pregnancy.

5. Pretended pregnancy, with the means of detecting the imposition.

6. Physiological remarks as to the period at which a fœtus may be considered as first animated, and the marks by which an animate may be distinguished from an inanimate fœtus.

7. Abortion.

8. Superfœtation.

9. The doctrine of moles and monstrosity considered, particularly of that species termed hermaphrodites.

10. Impotence and sterility, with the various causes by which they may be induced.

11. Feigned diseases.

12. Concealed diseases; under which head are noticed those contagious diseases which are most frequently concealed, with the mode of detecting them.

13. Poisons, with the various modes in which they may be applied, the tests by which the metallic poisons may be distinguished, and the proper antidote for each of them.

14. The particular manner in which the bodies of those suspected to have died in consequence of violence are to be examined.

15. Wounds; the circumstances necessary in order to constitute a fatal wound, and the consequences arising from wounds of the different viscera of the body.

16. Infanticide; the different modes by which the detection of this crime may be effected are particularly noticed.

17. Death in consequence either of hanging or drowning; its proximate cause in both cases, and the most approved methods of restoring suspended animation in consequence of either of these causes are pointed out.

18. Observations on the necessity of medical etiquette, together with an account of that most generally adopted.

19. The propriety of permitting certain manufactories, in thickly inhabited places, slaughter houses, &c. considered; with the means by which the unpleasant consequences arising from their proximity may be prevented.

20. The salubrity and insalubrity of particular kinds of water, with the principal causes of such differences.

Medical Commencement in the University of New-York.

AGREEABLY to a resolve of the Hon. the Regents of the University, the annual commencement for the purpose of conferring the degree of Doctor of Medicine, in the College of Physicians and Surgeons, was held on Tuesday, the 3d of May last. The exercises took place in the hall of the college, and were honoured with the presence of a numerous and respectable audience, among whom were the Regents of the University, the Trustees, Professors, and other officers of the College; the President, Provost, and Professor of Columbia College, &c. The degree of Doctor of Medicine was granted to the following eleven gentleman who had been students of the University, had undergone the several examinations required by its laws, and publicly defended their respective inaugural Dissertations. After the candidates were vested with their academic honours the president, Dr. S. BARD, delivered a Charge to the graduates.

CORNELIUS E. DE PUY, of Ulster county, N. Y. "On External Applications."

CHARLES DE WITT HASBROOK, A. B. of Ulster county, N. Y. "On the Anatomy of the Great Sympathetic Nerve."

JOSEPH HANSON, A. B. of Rensselaer county, N. Y. "On Typhus Fever."

ANSEL W. IVES, of Connecticut. "On the proximate cause of death, from Suspended Respiration, in drowning, and hanging, with the means of Resuscitation."

JAMES FERGUS M'REE, of North Carolina. "On the Bilious Remittent Fever of North Carolina."

WILLIAM F. QUITMAN, of Dutchess county, N. Y. "On the Nature and Treatment of Gout,"

ABRAHAM D. SPOOR, of Greene county, N. Y. "On Cutaneous Perspiration."

FERDINAND S. SCHENCK, of New-Jersey. "On Dysentery."

WILLIAM VAN DEURSEN, A. M. of New-Jersey. "On the Typhoid Pneumonia."

Samuel Woodruff, of Albany county, N. Y. "On the Vis Insita."

Robert H. Wilson, A. M. of the District of Columbia. "On Worms."

At the same time the honorary degree of Doctor of Medicine was conferred upon Wright Post, joint professor of Anatomy, Physiology, and Surgery in the University of New-York, and John C. Osborn, Professor of Midwifery, and the Diseases of Women and Children, in the same Institution.

New-York Historical Society.

At a meeting of the New-York Historical Society, held on Tuesday, the 11th of January, 1814, the following persons were elected officers for the ensuing year:

Hon. Egbert Benson, LL.D. President.
Hon. Gouverneur Morris, First Vice President.
Hon. De Witt Clinton, LL.D. Second Vice President.
David Hosack, M. D. Corresponding Secretary.*
John Pintard, Esq. Recording Secretary.
Charles Wilkes, Esq. Treasurer.
John W. Francis, M. D. Librarian.

Standing Committee.

William Johnson, Esq. — Dr. Samuel L. Mitchill,
Rev. Dr. J. M. Mason, — John M'Kesson, Esq.
Gulian C. Verplanck, Esq. — Peter A. Jay, Esq.†
Anthony Bleecker, Esq.

Committee of Publication.

Dr. David Hosack, — John Pintard, Esq. and
Dr. John W. Francis.

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* Vice Rev. Dr. Samuel Miller, resigned.
† Vice Dr. David Hosack, elected Corresponding Secretary.

Arrangement and Description of the Codfishes of New-York: addressed to the Editors, by S. L. MITCHILL, M. D. *Professor of Natural History, &c.*

FOR several years I have found it needful, from time to time, to turn my attention to the history and economy of fish. The treaty concluded with Great Britain on the 3d Sept. 1783, had secured to the citizens of the United States the right to take fish of every kind on the several banks of Newfoundland, in the gulf of St. Lawrence, and at all other places in the sea where the inhabitants of both countries used heretofore to fish; with various other privileges and advantages. Congress had at several times legislated on these fisheries, and made rules for governing the fishermen employed therein. In 1802 the president, in his message to congress, said that "one of the landmarks by which we were to guide ourselves on all our proceedings, was to foster our fisheries as nurseries of navigation and for the nurture of man." The house of representatives referred this subject to a select committee, and on the 12th Feb. 1803, Mr. Huger, of South Carolina, made a report which was laid upon the table. It was afterwards my lot to make, in an official capacity, as chairman of the committee of commerce and manufactures, a report to the same body, on a memorial from the inhabitants of Nantucket. This was on the 7th Nov. 1803, and on the 15th it was resolved to institute a new inquiry into the fisheries. On the 2d Jan. 1804, the same gentleman who had considered the paragraph of the message, brought forward a very circumstantial and instructive body of information on the cod and whale fisheries. It is indeed the last document extant upon those branches of American industry. The former of those employments was at that time judged to be sufficiently thriving, without further legislative encouragement: and the project

of a bounty for reviving the declining whale fishery was not adopted.

Since that time, fish and fishing have presented themselves to my view, as more important than I ever before considered them. In the market and waters of New-York, there was great opportunity to gather information. I have sought intelligence from every practicable source. I send you the result of my researches as far as they go. They amount to *eleven* species, and *six* varieties of the cod. And I have no doubt that in due time I shall find several more.

Our rivers, bays, and seas, abound with fish. Many sorts of them are evidently unknown to science; and others very badly described.

The renewal of the discussion about the fisheries has given an interest to almost every thing relative thereto. The history of one sort of cod, naturally led to that of his congeners, or kindred sorts. A family of creatures which are all of them savoury, nutritious, and wholesome, as the food of man, and several species of which are among the most prolific and numerous of the finny tribes, must be considered by every judicious person as worthy of a particular and intimate acquaintance. And this is acknowledged by the politician, the naturalist, the sportsman, and the housekeeper.

When it is considered that the enjoyment of the codfishery is involved in the present war, scarcely any person can entertain a doubt of the usefulness of an acquaintance with the more plentiful, and highly-prized species. This list may probably aid the statesman in the attainment of such knowledge; and if it should fail in this object, it may serve as a manual or guide to him who wishes to understand the history of one of the families of New-York fish.

Cod. Gadus.

Generic character.

Head smooth; Gill membrane, seven rayed. Body oblong, covered with deciduous scales. Fins all covered by the common skin. Dorsal and anal generally more than one, the rays unarmed; ventral fins slender, ending in a point.

* Codfish with three dorsal fins and bearded mouth.

Bank Cod. Gadus morhua.

Great Cod fish, of an ashen colour, with yellowish spots, broadish scales, and first ray of their anal fin stiff or spinous.

This fish is found at times in the New-York market, being caught in the sea near Nantucket and beyond. We get him, however, only in the cool season; for the summer temperature of our waters kills him. He is therefore only found between November and April.

The character is so exactly that of the later European writers, that I deem it unnecessary to give a particular description of him. He is not common on our stalls. But the species next to be mentioned is much more frequent.

Common Cod of New-York. Gadus callarias.

With ashen back, white belly, head and body spotted with brown; even tail, and projecting upper jaw.

A middle-sized fish of this species is twenty-five inches long, and weighs five pounds and a half. Colour pale—also prettily spotted with yellowish. The lateral line grows broader and plainer until it reaches the part of the body situated between the third dorsal and second anal fin. It is nearly straight until it reaches the place of a line drawn perpendicularly from the vent. Tail even, jaws, palate, and throat, all toothed. Lower jaw has one row of teeth; upper several. First and second rays of the ven-

tral fins separated or bifid; and their hue reddish or whitish. No spines upon the anal or any other fins. Upper jaw longer than the lower.

I have noted this fish as the *Dorse* or *Gadus Callarias*, notwithstanding his great size and some other well-marked differences. Should the character not correspond, he must be considered a distinct species.

Of this fish there is a remarkable variety, denominated

(b) The SHOAL-COD, or SCHOOL-COD; *(Gadus arenosus)* which is specifically the same with the preceding, but has less of the yellow complexion. The hue is more of a greenish brown, with spots of less distinctness. The fishermen say that the Shoal cod is taken on the level and sandy bottoms, while the yellowish or *Rock-cod* to be immediately mentioned, is caught on the rough grounds; and perhaps this reason is a practical and sufficient one.

There is a further variety, called

(c) The ROCK-COD; *(Gadus rupestris)* which is chiefly distinguished by his dwarfish size, rusty complexion, and more chubby shape.

TOM COD. GADUS TOMCODUS.

The length is about ten or twelve inches. Snout round and blunt; mouth considerably under, and of moderate size; small teeth in the jaws, palate, and throat. Tongue distinct, white, fleshy, and small; lateral line incurvated upward. Ventral fins bifid; the second ray longer than the first. Eyes small and yellowish; tail convex.

This fish appears under various forms, which make his history difficult to write. I shall attempt an enumeration of the principal.

(b) G. TOMCODUS *fuscus;* or *brown tomcod*, with the back and upper parts of the sides a mottled brown or olive. Chin and belly often carnation.

(c) G. TOMCODUS *luteus;* or *yellow tomcod*, with darker brown or olive on the back and sides, intermixed with yellow there and along the belly.

(d) G. T. *luteo-pallidus*, or *yellowish-white tomcod;* with yellow and white mixed with different shades of brown and olive.

(e) G. T. *mixtus*, or *mixed tomcod;* with yet other modifications of colours, and with variations in the rays of the fins.

All these varieties of the tomcod and those of the *Gadus pruinosus* to be mentioned afterward, are sold in the New-York market indiscriminately, as individuals of the same species. And *Tomcod* and *Frostfish* are used to indicate the same animal. Nevertheless, I have reason to believe them distinct.

On contracting the tomcod with the frost fish, (that is, the G. *tomcodus* with the G. *pruinosus* of the present arrangement,) there were observed to be several marks of difference: 1. in the magnitude, the tomcods being larger: 2. the tomcod has a cirrhus, while the frost fish has none: 3. in the tomcod the second ray of the ventral fin is longest, whereas in the frost fish the first ray is the longest: 4. in the frostfish there are frequently traces of five, six, or more bars or zones of a brown colour along the sides, while the tomcod is merely mottled.

Still both the species and their varieties are called, without any discrimination, tomcod or frost fish, according to the fisherman's fancy.

The difference of sex and age evidently increases the varieties of this species. And so numerous and perplexing are they, that the specific name might with propriety be *multiform* or G. *polymorphus*.

As far as I can ascertain by reiterated countings, the more usual number of the rays in the fins is as follows; branchial, seven; ventral, six; pectoral, seventeen; dorsals, thirteen, eighteen, and nineteen; anals, twenty-two and eighteen: caudal, thirty-nine.

Haddock. Gadus Æglefinus.

Has a whitish skin, a black lateral line, forked tail, and an upper jaw longer than the lower.

Is occasionally found among the other species of Gadus in the New-York market. And in addition to the before-mentioned cha-

racters, is distinguished by the dusky cast of his back, his large eyes, and small round scales. Length when full grown about twenty inches.

Blennoid Cod. Gadus Blennoides.

So called from his resemblance to a Blenny. The mouth has minute rows of sharp teeth in both jaws. Two toothed spots or patches on the palate. Throat streaked lengthwise. Lateral line curved, eyes large. Colour brown, but less so on the belly than back. Flesh soft, vent nearer the head than tail. Ventral fins bifid and extending like threads. Tail even; or rather projecting toward the middle rays. The branchial rays are six; pectoral, thirteen; dorsal, ten, sixteen, thirty-six; ventral, two; anal, forty-five; caudal, twenty-three.

* * Codfish with three dorsal fins, and beardless mouth.

Frostfish. Gadus pruinosus.

The difference between this fish and the tomcod has been already stated. He is about eight or nine inches long. The back is brown, and belly whitish. Lateral line curved. Eyes small, black, and pretty; lower jaw shorter than the upper; vent nearer the head. Caudal extremity even or nearly so. Like the tomcod, caught in the New-York salt waters all the year round; but more abundant in autumn at the season of frost; whence his name.

Rays, Br. 7. P. 13. V. 5. D. 14, 15, 16, A. 18—19. C. 36.

New-York Pollack. Gadus Purpureus.

With greenish spotless back, forked tail, and purplish fins.

His length is about twenty inches, and depth five. The snout is rather pointed. The lower jaw is longer than the upper. Tail divided. Ventral fins short and small. Colour of the lips, inside of the mouth, and gill-covers purplish and dark. Jaws finely toothed. Small patches in the palate. Eyes large and silvery. Lateral line white, straight, and broad; becoming more short and narrow toward the tail.

Colour of the back a dusky olive or bottle green without spots. Sides and outer gill-covers pale, with tints of yellowish, and becoming whiter at the belly and chin. Dorsal and pectoral fins dusky green; caudal and both anals purple; ventrals faintly reddish. Though there is some diversity in these particulars. The rays in the fins are Br. 7. V. 6. D. 15—19—23. P. 21. A. 20—19.

* * * Codfish with two dorsal fins.

Hake. Gadus merluccius.

With double rows of sharp teeth, broad and scaly lateral line; beardless chin, and even tail.

The specimen before me is about fifteen inches long; two deep; and five in girth. Caught with the other cod. The head is rather long; and the body is slender, and tapers away to the tail. The colour of the back is a pale brown; of the belly a dirty white. No cirrhus to the chin. The mouth is wide and capacious. The lower jaw is longer than the upper; and both are armed with acute and hooked teeth, in a two rowed and formidable array. The back part of the tongue, the palate, and the throat are also patched with teeth. The palate, throat and lining of the gill-covers are dark-coloured. Grooves and channels on the top of the head. The eyes are very large with a yellow iris and brown circumference. There are two dorsal fins, the foremost of which consists of twelve rays, and the hindmost of thirty-eight. The gill membrane has seven rays; the pectoral fin thirteen; the ventral seven; the anal forty-one; and the caudal twenty-seven.

The lateral line runs nearly straight from the upper part of the gill-opening, to the middle of the tail, and is furrowed in such a manner as to give it a broad and double appearance. The scales are deciduous from the back; more adhesive to the belly; and frequently stick to the line. There are five or six small warts on a row in the line not far from the gill opening. The ventral fins are shorter than the pectoral, and both are pointed. The vent is nearer the head. The extremity of the tail is even; and the gill-cover is rather peaked behind.

Slender Cod. Gadus tenuis.

With bearded chin, streaked throat, convex tail, and bifid ventral fins.

Is about fifteen inches long. Has brown back and sides; but not so much so below as above. The fins are dark brown, save the ventral, which are whitish and long, ending in red bifid extremities. Eyes of moderate size, and black. Lateral line curved upwards. Mouth and palate furnished with sharp teeth. Tongue smooth. A small cirrhus beneath the chin. Tail roundish. Throat internally streaked with red and purple. Vent nearer the head. The rays in the fins are, Br. 7; V. 2; P. 16; D. 11—54; A. 44; C. 25.

Codling. Gadus Longipes.

With lanceolated body, very long ventral fins; and first ray of the anterior dorsal elongated and flexible.

Length about twenty inches; depth three and a half. The first ray of the first dorsal almost six inches long. Body tapering. Scales besmeared with slime, rendering them slippery and rather obscure. Head sloping, roundish, and smooth. Eyes large and pale. Upper jaw projects. Beneath and within it a distinct movable lip. Lower jaw shuts easily within this lip. The upper lip and lower jaw are furnished with rows of small teeth. Palate and throat also toothed. Tongue large, smooth, and fleshy. Sides of the tongue and inside of the throat smutty, or dotted with black. Mouth capacious; gill-openings ample. A small cirrhus under the chin. Weighs sometimes as heavy as eighteen pounds. The ventral fins are six inches long, bifid, tapering, and reddish.

The lateral line begins over the bronchial opening, and runs nearly parallel with the back. Colour of the back and sides a ruddy brown; of the belly white, tinged with yellowish. Dorsal and anal fins terminate abruptly, and leave a short unoccupied

space between themselves and the tail; the body having at that place become narrow and slender.

This is the *hake* of the New-York fishermen.

Rays, B. 7. V. 2. P. 17. D. 10—54. A. 49. C. 21.

Spotted Cod. Gadus punctatus.

With a black spot in the anterior dorsal fin, black-tipped anal fin, and speckled lateral line. Length, ten inches; depth, nearly three. Figure, that of a fish with a small head, large body, and rather diminutive tail.

Colour of the back and sides, pale brown or whitish; with lines between the scales. Hue of the neck and belly, a dull white, with suffusions of cream colour. Two dorsal fins; of which the foremost has eight or nine rays. It is brown for a short distance above the back; then becomes white; above, it exhibits the form of a black spot; is surmounted by the white tips or summits of the rays.

The second dorsal consists of about forty-seven oblique rays; and reaches almost to the tail. It varies but little from the colour of the back.

The anal fin reaches almost all the way from the vent to the tail. It consists also of about forty-seven rays. It is browner than the contiguous parts. Its extremity or lower margin is black.

The ventral fins are two cleft: and lilach or flesh coloured; second ray is two inches long.

The pectoral fins are thirteen, rayed and roundish. Caudal fin, twenty-three, rayed, tapering at the sides, and nearly even at the end.

Lateral line distinct and peculiar; consisting of a narrow black mark, extending from the upper part of the gill-opening to the tail, and alternating at spaces of half an inch apart, with white dashes about one eighth of an inch long. The black and white of the lateral line make a striking and pretty appearance.

Chin has one small cirrhus. Lips, palate, and throat, armed

with minute sharp teeth. Mouth capacious. Eyes large and whitish. Lower jaw shuts within the upper. Scales soft and very deciduous.

In some individuals there is an imperfect whitish straight fillet under the lateral line. This is one of the rarest of the enumerated species.

Canal Navigation.

The following Report of the Commissioners, appointed by the Legislature to provide for the internal improvement of the State, was laid before the Assembly of New-York, March 8th, 1814. By the publication of this paper, the reader is in possession of all the official documents hitherto offered the Legislature, as the joint Reports of the Board of Commissioners.

We regret that our limits prevent the insertion, in the Register, of the interesting correspondence between the Hon. Gouverneur Morris and Robert Fulton, Esq. on the advantages of the proposed canal, from Lake Erie, to Hudson's River. The same cause has induced us, reluctantly, to omit the publication of Judge Woodward's able Report on this important subject, which was made to the Michigan government, as long ago as January, 1812, but of which a copy has only lately been put into our hands. Judge Woodward is the only writer of consequence that has yet appeared, whose opinions differ materially from those supported by the Commissioners.—*Ed.*

" The Commissioners appointed in and by an act of the Legislature of the state of New-York, to provide for the internal improvement of the state,

" Beg leave to report—

"That in compliance with their official duty, having made the fullest inquiries and investigations in their power, they have appointed an engineer to trace out the course, and estimate the expense of the proposed canal; as, also, to superintend such portion of the whole line as may be approved of by the Legislature. He would probably have arrived before the present hour, had impediments to an intercourse with Great Britain been removed.

"They sought a proper character in that country, preferably to any other, because, from its extensive interior communication by canals, railways, and other expedients, they expect that a more intimate knowledge of useful facts can be obtained there than elsewhere; and because an Englishman, speaking the same languages, and habituated to the same usages and manners, will more easily acquire information among us, and be less liable to imposition.

"On the arrival of the engineer, the commissioners will immediately direct such surveys to be made as may be necessary, in order to ascertain the exact line of the canal from lake Erie to the Hudson; and when this work is completed, the estimates of the engineer shall, as soon as possible, be laid before the Legislature, who will then be able to form such a decision as will best promote the prosperity of the state.

"The commissioners have, in the mean time, caused further investigations to be made, and would not have suspended the surveys, as they did during the last summer, but for military operations, which are not favourable to internal improvement. They have, however, the satisfaction to state, that every examination tends to show, not only the practicability, but the facility, of his enterprise; so far as the term facility can reasonably be applied to a work of such magnitude. They add with much pleasure, that it will not be difficult to extend this communication to the fertile vales watered by the Susquehannah and its wide-spreading branches. Hence they presume, that the public spirit which has always characterized Pennsylvania, will, at a proper time, induce her to coöperate. It may, indeed, be objected, that, to facilitate the intercourse of a commercial rival may be of more comparative loss than positive advantage. But far be such jea-

lousies from the councils of New-York: Marked by nature for greatness, and strong in the consciousness of intrinsic strength, she will always feel that nobleness of soul which would rather accelerate than retard her neighbour's prosperity.

"The commissioners cannot quit this branch of the subject, without stepping a little out of the road in which they ought strictly to walk, for the purpose of expressing their belief, that the communication long since contemplated, between Lake Champlain and Hudson's River, may easily be effected; and thus another of those great avenues be opened, which Providence has so well prepared, that little more is left for the state than merely to will the possession of wealth and power.

"The commissioners have, also, conformably to the powers conferred on them, applied for and obtained grants of land, a schedule whereof is annexed to this report. It would be improper not to acknowledge the liberality of the grantors; but it would be doing injustice to their intelligence, should it be doubted, that a prudent regard to their own interest had its proper share in their determinations. The clear-sighted perception of mankind, respecting matters which affect their property, opened to their view the benefits which they must derive from this extensive inland communication. They, as a part, see and feel what the state, as a whole, must acquire by it; and the solidity of their opinion is the less to be questioned, as the light, in coming to their mental vision, has neither been intercepted by the opacity of dull conception, nor refracted by passing through mediums of misrepresentation.

"The value of these lands will increase by every year of approaching settlement, and every avenue of making new ones. We may, therefore, safely calculate, that in the course of twenty or thirty years, the proceeds of these lands will reimburse to the state no small portion of the expense it may incur by completing the whole line of the proposed canal; and here we must remind gentlemen of what has frequently occurred to their own reflection, that although twenty or thirty years be a large portion of

individual existence, they form but a short period of national duration.

"The commissioners have also performed the duty of attempting a loan in Europe, conformably to the terms, and within the limits, prescribed. They have reason to believe, that their efforts would have been crowned with success, had not the declaration of war been nearly simultaneous with the grant of authority to make a loan. The attempt having failed, no farther measures have been adopted in relation to this object.

"The commissioners having thus rapidly recited facts, which it is their duty to communicate, would be wanting to the public interest, did they not notice attempts to excite opposition to the work committed to their charge. They have examined in their preceding reports the reasons advanced by its opposers, and would endeavour to answer other reasons, if any such they could hear of. In the face of incontrovertible facts the supposed superiority of what is called the natural communication, by Lake Ontario, has been strongly insisted on, and of late the prodigious advantage of carrying on the internal trade of America, through sea-ports of the St. Lawrence was ostentatiously displayed to prove, that a canal through the Western District of New-York is an idle project.

"These gentlemen could not indeed deny, that there is some risk in navigating the Lake, and some difficulty in descending the river; but neither the risk nor the difficulty, nor both combined, are considered as serious obstacles. To men of such sanguine temper, it is useless to observe, that this communication would be much more expensive than the one contemplated, and that it is closed from November to May by the rigid laws of nature; but what are the laws of nature to gentlemen enamoured with their own conceptions? Disdaining to consider the actual state of things, whenever map-makers trace a stream, they find a military and commercial highway. Should there be a want of water, it is supplied by their depth of intellect; should the surface be covered with ice, it is thawed by their warmth of imagination. To contend with such men is no easy task, for they make

facts as they go along, and reason they disclaim; insisting, that whatsoever they think proper to approve of is sublime; whatsoever they think proper to dislike is absurd. From these decrees, pronounced with an air of censorial gravity, and the contemptuous smile of superior intelligence, they admit of no appeal. Far from imitating them, the commissioners will not have the hardihood to question their sagacity, neither will they, after industriously applying the share of common sense allotted to them by the Divine Goodness, to the object of their appointment, pretend, even on that subject, to vie with gentlemen whose privilege it is to understand, and whose prerogative to decide, according to the inverse proportion of their knowledge. With all due deference, nevertheless, to such ethereal minds, they are constrained, by stubborn habit, to adhere to the opinion of intelligent professional men. And here the commissioners beg leave to remark, that they are much misunderstood, when it is supposed, that they recommend, *exclusively*, a canal descending, according to the level of the country, like an inclined plane. On the contrary, their project embraces the system of locks as well as the other, and their opinion is, that the operation must be regulated by the nature of the country, taking into view the diminution of expense, and the shortening of distance. And they beg leave to call to the recollection of the Legislature the decided opinion of Mr. William Weston, one of the most eminent civil engineers in Europe, who was formerly employed by the Inland Lock Navigation Company of this state, and who is perfectly acquainted with the country. In a letter to one of the commissioners, he says, 'Should your *noble* but *stupendous* plan of uniting Lake Erie with the Hudson, be carried into effect, you have to fear no *rivalry*. The commerce of the immense extent of country, bordering on the upper lakes, is your's forever, and to such an incalculable amount as would baffle all conjecture to conceive. Its execution would confer immortal honour on the projectors and supporters, and would, in its eventual consequences, render New-York the greatest commercial emporium in the world, with perhaps the exception, at some dis-

tant day, of New-Orleans, or some other *depot* at the mouth of the majestic Mississippi. From your perspicuous topographical description, and neat plan and profile of the route of the contemplated canal, I entertain little doubt of the *practicability* of the measure. Perhaps this is the only question which the Legislature should be particularly anxious to have resolved. The *expense*, be *it* what it may, is no object when compared with the incalculable benefits arising therefrom, though, doubtless, it will deserve attention, that the money granted liberally be wisely and economically expended.'

"All which is humbly submitted."

Further Accounts of the Public Institutions of New-York.

In order to render the account of the different literary and humane institutions which add so much to the character of New-York more ample and satisfactory, and for the purpose of making the Register the vehicle of such information, we here insert the following brief notices of the Humane Society, the New-York Lying-in Hospital, and the New-York City Dispensary, institutions whose importance and salutary influence have been long known and duly appreciated.

Sketch of the Origin and Progress of the Humane Society of the City of New-York.

THERE is, perhaps, no class of objects more deserving of the exercise of beneficence than that of *destitute debtors in prison.* However politicians may differ as to the general expediency of imprisonment for debt, the propriety of relieving those who may become the subjects of it cannot be doubted. Even on the principle of imprisonment being a justifiable punishment of the debtor, most certainly a confinement that leaves him exposed, (beside

the unavoidable evils of his situation) to the sufferings of cold and hunger, and the consequent hazard of his life, infringes that fundamental axiom in legislation, that the punishment of an offence should always be in proportion to the degree of it.

It is, indeed, a subject worthy consideration in what mode this relief is to be administered; whether from the purse of the creditor, or from that of the state. But from the discussion of this question we are precluded. The framers of the constitution, and the successive legislatures of this state, have made no provision whatever for this case.

To supply this defect, on the 26th of January, 1787, a number of respectable citizens formed themselves into an association under the name of a "*Society for the Relief of Distressed Debtors.*"

Their objects were two-fold:

1. To administer to the comfort of prisoners, by providing food, fuel, clothing, and other necessaries of life.

2. To procure the liberation of such as were confined for small sums, and were of meritorious conduct, by discharging their debts.

To enable them efficiently to prosecute the undertaking, the association depended on the coöperation of the public at large. They were not disappointed. By means of donations in articles of food and clothing, and in money from charitable individuals, they were made the instruments of contributing a speedy and welcome, though, at first, but limited relief to the necessities of the debtor.

The utility of the institution was rendered more and more manifest by the increasing calls on its compassion. These, however, becoming disproportionate to its means, it was obliged to select from among its modes of relief those which would be most productive of solid benefits, and to restrict its appropriations to such articles as were most susceptible of caution in the distribution. To this they were moreover prompted by the many frauds that soon began to take place in the system which had hitherto prevailed.

While the supporters of this institution were thus administering to the wants of the debtor, they were not unmindful of their duty to endeavour to obtain legislative interference in his behalf, and, at an early period, they directed their attention to procuring such alterations in the system of our laws as experience had convinced them was most proper. The case of persons imprisoned for *small sums*, who composed the greater part of the whole number of prisoners, was one for which they particularly desired legislative provision.

In pursuance of this system of improvement they, in the year 1788, appointed a committee, to prepare a memorial to the legislature of the state on this subject.

This memorial was taken into consideration by the legislature, and, in the session of 1788—9, a law was enacted, by which debtors imprisoned for a less sum than twenty-five dollars are liberated after a confinement of thirty days. The best proof of the policy of this law is its continuance to the present day.

As connected with the comfort of the prisoners, the society could not avoid observing the irregularities in the jail, occasioned by the admission into it of spirituous liquors, a circumstance which had been mentioned in the memorial, and, accordingly, endeavoured to remedy the evil. Several minor regulations proving ineffectual, an application was made in 1791, to the legislature, and a law was thereupon passed, by which it was declared, "That henceforward no spirituous liquors should, upon any pretence whatever, be sold within the jail of the city and county of New-York, nor should any kind, except table beer or cider, be brought into it for the use of any prisoner, unless with the certificate of a physician that the same is necessary for his health; and it is made the duty of the sheriff to cause the said law to be observed, under the penalty of 250 dollars.

The society continued its operations, supported solely by the casual bounty of individuals, which fortunately kept pace with the increasing demands on its charity. In 1791, seventy-one persons were relieved by it, and several debtors were discharged.

A committee for the visitation of the jail was now appointed,

to whose particular care the prisoners were intrusted, and nothing was neglected that could administer to their comfort and health, or preserve the prison in a state of cleanliness. At the instance of the society, the corporation of the city provided wholesome water for the prisoners, and the attendance of a physician on such as were sick.

For a number of succeeding years no change occurred in its character or proceedings.

In 1794 one hundred and eight persons were relieved. In 1796 one hundred and twenty-six. In 1799 one hundred and fifty-four.

In 1802 two hundred persons were relieved.

Among the debtors in prison are generally some who are entitled by law to be discharged, but whose confinement is prolonged from ignorance of their rights, or inability to employ legal aid to maintain them. The society, in 1801, undertook to remedy the evils arising from this circumstance, by appointing a counsellor, to whom the causes of such persons were referred, as were reported from time to time by the visiting committee.

In 1802 an alteration took place in the mode of furnishing sustenance to the prisoners, which had hitherto been by distributing among them unprepared articles of food. But, as the prisoners were often tempted to exchange their allowance for spirituous liquors, Gen. M. Clarkson and Dr. D. Hosack were appointed a committee to devise and report a system more economical and less liable to abuse. Upon their report, which was adopted, the society resolved to provide a house in the vicinity of the jail, where the provisions might be cooked and prepared under the superintendance of a matron, and the prisoners thereby supplied with soup and such other articles of diet as are used in institutions of a similar kind in Europe. It was also proposed to extend the plan, so as, on occasions of public calamity, to furnish soup at a reduced price to the poor of the city in general. Experience has fully sanctioned the wisdom of this plan.

About this time, on application to the corporation of this city, that honourable body generously gave the society, beside the sum

of six hundred dollars, the lot of ground in Tryon-street on which the present Soup House is erected.

In 1803, the society, in consequence of the enlargement of its plan, changed its name to that of the Humane Society of the City of New-York.

In imitation of the Royal Humane Society of London, the society, in the year 1806, resolved to devote a portion of its care to the resuscitation of persons apparently dead from drowning; to which its attention was invited by a communication from that institution, exhibiting the very great success with which their exertions had been accompanied. Several sets of apparatus were accordingly provided for this purpose, and physicians appointed to take charge of them, and lend the requisite medical aid. Certain plain and brief directions to be pursued in cases of this kind were also prepared and published in the papers of this city.* The additional expenses attending this extension of the original plan of the society, induced them to seek a dependence less precarious and uncertain than occasional donations, and accordingly the mode of permanent annual subscriptions was now proposed and adopted.

In 1810 five hundred and fourteen persons were relieved. In 1811 five hundred and thirty-six.

In the present year (1814) an application was made for an act of incorporation, which the legislature was pleased to grant.

The charity of the society is now divided into the following branches:

1. The support and clothing of debtors in prison, and, as connected with the former, the maintenance of a soup-house establishment.

2. The liberation of such debtors as are by law entitled to be discharged, and of such as are confined for small sums, and are peculiarly deserving of assistance.

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* See American Med. and Philos. Register, vol. II.

3. The distribution of soup to the poor in general, especially in cases of general public calamity.

4. The resuscitation of persons apparantly dead from drowning.

In addition to the above it may be observed, that a favourite object of the society is to discourage the practice of street begging, so disgraceful to a well-regulated city. The cheerfulness with which the community has listened to applications for aid exhibits the sense entertained of its services, and demonstrates their utility.

"Although the *imprisoned debtor* has not yet met with public provision for his support, this circumstance is to be attributed to the amelioration of his condition, effected by the charitable interposition of this institution. But it is earnestly hoped that the present partial support which is furnished by the Humane Society, will not prevent that permanent legislative provision which the occasion so loudly demands.

Sketch of the New-York Lying-in Hospital.

THE object of this institution is to afford an asylum to women in a state of pregnancy, who are destitute of the means of support, and who are unable to procure the necessary medical assistance and nursing during the period of their confinement.

The poor constitute an important portion of almost every large community; and, consequently, have a powerful claim upon the assistance of the wealthy. At all times there are many persons of the description just mentioned, as the especial objects of this charity; and though individual liberality in many instances had been manifested to obviate and remedy the evils under which they laboured, yet it was not until 1798, that an attempt was made to provide a suitable establishment for their reception and relief. The dreadful mortality which accompanied the yellow fever, as it prevailed in this city, in the summer of this year, and the

great distress consequent thereon, operated with peculiar severity upon the labouring poor; and many women being bereft of their husbands, were rendered wretched under the accumulated evils of grief and poverty.

As New-York, though already preëminently distinguished for its charitable institutions, did not afford any provision for this class of the poor, the present occasion was deemed proper to project an establishment for this purpose. Accordingly, in the ensuing October, a subscription was set on foot, by Dr. David Hosack, which was patronized by many of the most respectable citizens of this city, and the sum of nearly five thousand dollars collected. The laudable designs of the association were immediately carried into effect, an appropriate building being procured for the charity in Cedar-street, where they continued in operation for some time.

The committee appointed to draft a constitution for the government of the society consisted of Thomas Pearsall, sen., Robert Lenox, Dr. T. S. Robertson, Henry Remsen, and Dr. David Hosack, and among other liberal provisions which it made we find the following: Every person subscribing the sum of twenty dollars shall be privileged to recommend a patient to the Lying-in Hospital, if approved of by the visiting committee.

It being afterwards ascertained that the interest arising from the society's funds, was by no means sufficient to meet the expenses which a separate institution demanded, in 1801 an agreement was entered into between the New-York Hospital and the governors of the Lying-in Hospital, by which the interest of the then existing funds of the latter were to be paid to the use of the former institution, on condition that a Lying-in ward should be established; and a suitable ward for that purpose was accordingly fitted up and opened for the reception of patients, the express objects of the Lying-in Hospital.

Since the above period the Lying-in Hospital has carried into execution its humane and benevolent plan of affording relief to destitute females at the apartments which they have provided in the New-York Hospital: and the charity which it has thus dis-

pensed while it will be admitted that it has been directed to objects who of all others have a particular claim to attention, so must it also be allowed to be most extensively diffused. In 1799 an act to incorporate the Lying-in Hospital was granted by the state legislature.

By bequests, donations, the interests of the society's fund, and other appropriations which are constantly augmenting their resources it is ardently hoped, and believed, that the time is not far distant when the governors of the Lying-in Hospital will be enabled to erect a commodious and separate establishment for the better accomplishment of their praiseworthy undertaking, and thus add another to the many charitable institutions of this city, which announce so decidedly, and so favourably, the humanity of its inhabitants.

Officers of the New-York Lying-in Hospital, elected September, 1813.

Cornelius Ray, President.
Dr. Anthon, Vice-President.
Frederick Depeyster, Treasurer.
Peter Augustus Jay, Secretary.

Physicians.

Dr. Post.
Dr. Hosack.
Dr. W. Moore.
Dr. Hamersley.

Sketch of the New-York City Dispensary.

The first attempt for the purpose of instituting the City Dispensary of New-York, was made on the 4th of January, 1791. On that day a number of the most respectable citizens of this city were convened together at the city hall in order to devise a method by which that class of our inhabitants who were suffering under the aggravated calamity of want and sickness might be relieved of their sufferings by the proper administration of medical aid. The Medical Society of the city of New-York, at the head of which presided the late distinguished Dr. John Bard,* fully sensible of the great advantages that would arise from such an institution, were also as a body particularly solicitous for its establishment; and at the same time materially contributed to the accomplishment of the projected plan. A constitution for the government of the association being agreed to, the late Hon. *Isaac Roosevelt Esq.* was chosen president, and Dr. Richard Bayley and Dr. Samuel Bard elected as senior physicians. Beside these physicians, twelve other members of the Medical Society were chosen by the Dispensary, to afford professional relief to the objects of its charity residing in different districts of the city.

The liberal and humane motives by which the patrons of the City Dispensary were actuated will be best seen by the following paragraph, forming the first section of their constitution, as amended and adopted on the 8th of February, 1791. "Every person who shall pay annually into the hands of the treasurer two dollars shall be a member of this institution, and be entitled to have two patients at one time on the Dispensary list, and for every two dollars and a half, which shall be annually paid by any subscriber over and above five dollars per annum, such sub-

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* Vide the life of Dr. John Bard; Register, vol. I.

scriber shall be entitled to have one other patient on the Dispensary list, and every subscriber who shall subscribe and pay fifty dollars shall be a member for life, and be entitled to have two patients always on the list."

The office of president having become vacant by the death of Isaac Roosevelt, Esq. the Rev. John Rodgers, D. D. was elected to fill that station in October, 1794. The exertions of Dr. Rodgers in promoting the interests of the Dispensary, as well as those of other humane establishments in this city, reflect lasting credit on his memory:* and as a mark of the confidence reposed in his character, it may here be stated that he was annually chosen as president of the institution until his resignation, in July, 1810, when the present officer, Gen. Matthew Clarkson, was elected his successor.

In April, 1805, an act to incorporate the contributors to the New-York Dispensary passed the legislature of this state.

From the report of the institution for this year, bearing date December 24th, 1795, it appears that the whole number of patients to whom it afforded relief during that time was 536. The epidemics with which the city had been visited in 1795, 1797, and 1798, having deprived many families of the means of support, greatly increased the number of applicants for the benefits of the Dispensary; the same may be said of the additional distress among the poor which occurred on account of the prevalence of the yellow fever in 1803. The demands made upon this charity having from these and other causes increased far beyond expectation, and the funds of the establishment proving inadequate to its numerous wants, necessarily called the attention of the board of trustees to the devising of other means, better calculated to fulfil the express intentions of their organization, and to enhance the utility and importance of their association. A committee was accordingly appointed to consider what alterations might be made in the management of the concerns of the Dispen-

* Vide Memoirs of the Rev. Dr. Rodgers, by Dr. Miller.

sary in order to extend "the benefits thereof, more generally to all descriptions of poor and suffering citizens." Among other alterations they recommended, that the city be divided into a certain number of districts; instead of the duties of the institution being confined solely to the resident physician of the establishment: that as at their first organization, that for each district, a physician be appointed whose duty it should be to give the requisite attention to all persons of the district who were proper objects of the Dispensary.

The report of the committee being agreed to, the city was divided into four districts, and four physicians appointed to take charge of all patients therein: and an apothecary was also chosen, for the purpose of preparing and distributing such medicines as were directed by the physicians.

The same year, 1805, a union was effected between the kine pock institution and the City Dispensary. The kine pock institution was established in New-York in January, 1802, for the purpose of substituting the cow pock inoculation in the place of the small pox; more particularly among the poor, and for preserving a constant supply of genuine matter.* The trustees of

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* *The New-York Institution for the inoculation of the kine pock*, organized on the 11th of January, 1802, most materially contributed to the promotion of the important objects for which it was instituted. Previously to this period, however, the benefits of vaccination were experienced and acknowledged in this city and other places in the United States. To that learned and most distinguished physician, Dr. GEORGE PEARSON, of St. George Hospital, London, to whom so much is due for the introduction of vaccination in Great Britain, the American republic is also largely indebted for his great exertions in making known the benefits of this discovery in this country. In order that the vaccine disease might be substituted for the small pox, Dr. Pearson transmitted, in a letter to Dr. Hosack, a thread impregnated with the matter of the vaccine virus: and in a letter to Dr. Hosack, toward the close of 1798, and which accompanied a copy of his "*Inquiry concerning the history of the cow-pox, principally with a view to supersede and extinguish the small pox*," published in London, November, 1797, he says; "I now send you my proof sheets of a new work on a subject which will much surprise you, and which promises to supersede that most loathsome disease the small pox. I wish you to inquire whether such a disease as the cow pox exists in America and give me advice of it. I send you this early information that you may avail yourself of it."

the City Dispensary, believing that the Dispensary might offer more and better opportunities for extending the vaccine inoculation than even the society so laudably instituted for this particular purpose, resolved, that should the contributors to the kine pock institution be of the same opinion, that the City Dispensary would pursue, with the same attention and fidelity, the objects of the vaccine establishment; and that the contributors to the last-mentioned association should retain the same privileges of recommending patients for inoculation that they originally possessed. Upon these honourable and equable terms, the kine pock establishment now constitutes one of the departments of the City Dispensary. The first physician appointed to vaccinate for the Dispensary under these regulations was Dr. Valentine Seaman.

According to the annual report, dated January, 1806, no less than 1,223 patients enjoyed the advantage of the City Dispensary, beside those who had received vaccine inoculation gratis. In the year 1808, the number of patients who enjoyed the advantage of the Dispensary was 1,340:—in 1811 the number was 1,446: the trustees also stated that in addition to these patients 1,016 had been vaccinated at their office since the first of January, 1811, gratis, and "that in every instance the kine pock has proved a perfect security against the small pox." "They think proper further to state that, notwithstanding every person applying at their office is vaccinated gratis, without any questions being asked, yet the small pox is suffered to spread—160 persons have died with the latter disease in this city during the year 1811." The following year 1,658 persons were admitted to the benefits of this institution; and in 1813, 2,110, exclusively of those who were vaccinated.

The objects of charity claiming the attention of the City Dispensary having of late greatly multiplied, the trustees have found it necessary to enlarge the plan of the institution: for this purpose they have divided the city into *six* districts, and have appointed a physician to each; and in order to secure to the sick the benefits of additional advice, they have appointed six consulting phy-

sicians, who may be called on by the attending physicians in all difficult or dangerous cases.

The corporation of New-York, with their characteristic liberality, in 1810, granted a lot of ground in Tryon-street as a convenient site for the Dispensary; and when we consider that the cause of humanity cannot be more truly served than by contributing to the relief of those who are the objects of this charity, it is hoped that at no distant period the trustees will be enabled to erect a spacious and commodious building for their purpose.

Literary and Philosophical Society of New-York.

Organized and Incorporated in 1814.

OFFICERS, ANNO 1814.

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JAMES KENT, LL. D.
DAVID HOSACK, M. D.
JOHN M. MASON, D. D. — } VICE-PRESIDENTS.

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Recording Secretaries.

James Renwick, A. M. — Jacob Van den Heuvel, Esq.

Curators.

John Pintard, A. M. — John W. Francis, M. D.

Thomas Eddy, *Treasurer.*

The Literary and Philosophical Society of New-York have committed to the press the 1st vol. of their Transactions, which will shortly appear, in 4to.

Chemical Laboratory in New-York.

It is with great satisfaction we state, that a Chemical Laboratory has been recently established in the vicinity of this city. This institution is well fitted up, is on a scale of considerable extent, and is under the direction of one eminently qualified for the station, Mr. Henry Dreyer, operating chemist, a gentleman who to the information derived from books adds the more useful and certain knowledge arising from practical observation. In the present state of our country we cannot but consider this establishment as highly important.

American Edition of Bell on the Venereal.

Messrs. Backus of Albany have issued proposals for publishing a new edition of Benjamin Bell's Treatise on Gonorrhœa Virulenta, and Lues Venerea. This edition will be adapted to the present state of practice in these diseases, and be materially improved and augmented by *notes*, furnished by the American editors, Doctors *Low* and *Beck*, of Albany. Bell's Treatise may be pronounced superior to any other hitherto published on the same subject, and when enriched, as is now proposed, with the valuable observations of the American editors, cannot fail to receive the attention of every practitioner who directs his attention to the diseases of which it treats.

Dr. Currie's Work on Fevers.

Dr. William Currie, of Philadelphia, will shortly publish, in one vol. 8vo., A Synopsis or General View of the most noted Theories or Doctrines of Diseases that have been taught at different periods. In this Synopsis the author will include a critical review of the Theories of the late Doctors Cullen, Brown, Darwin, and Rush, and of that of Dr. Gregory, the present professor of the Practice of Physic in the University of Edinburgh.

Bristed's Lectures on Law, &c.

JOHN BRISTED, Esq. has lately published, in a closely printed pamphlet of forty pages, *A Prospectus of a Series of Courses of Lectures on Law, to be delivered by John Bristed, Counsellor of Law.*

We have long been of opinion with regard to the profession of the law, as well as the other learned professions, that courses of lectures on the several subjects it embraces would afford the best means of instruction to the student; for at the same time that they are calculated to secure his attention they give him regular habits of thought and arrangement, and greatly abridge the labour of study. Under these impressions it gives us great pleasure to learn, that so extensive a system of instruction as that announced in the present prospectus is about to be undertaken by one in all respects so well qualified for the task.

Additions to the Library of the New-York Hospital.

The Library of the New-York Hospital has, within the last year, been most materially augmented. Among the very many valuable additions that have been made to it by the public spirited governors of the institution, may be enumerated the following scarce and important works, on medical science and on natural history. No other library in this country equals that of the hospital in the number and importance of its collections on this branch of science.

Anatomy of the Horse, folio, plates; Kestneri, Bibliotheca Medica. Zinn. Descriptio Oculi Humani, 4to. Ruyschii Opera Anat. Med. Chirurgica, 4to. Historia Morborum Halleri, Valsalva de Aure Humani, 4to. Baldingeri Opuscula Medica, 5 vols. Lieutaud, Historia Anatom. Medica, 2 vol. 4to., Cotunnius, de Aqueductibres. Bellini, de Motu Cordis et de Motu Bilis, 4to. Physiologiæ de Lewenhoeck, 4to. Sanctorini Anatomica, 4to; Fracastorius, Berkenhout, Plouquet, Morton, and Carthesier's Writings, &c. &c.

Sybilla Merian's Metamorphosis Insectorum Surinamensium, imp. folio, rare, original ed. Monro's Structure and Physiology of Fishes, folio; Edward's Gleanings in Natural History, orig. ed. 4to. 7 vols. Pennant's History of British Quadrupeds, 2 vols. 4to. Pennant's British Zoölogy, 4 vols. 8vo. Donovan's History of British Insects, 10 vols. 8vo. Donovan's History of British fishes, 3 vols. 8vo. Pennant's Genera of Birds, 4to. Pennant's Indian Zoölogy, 4to. Ellis's History of Corallines, 4to. Ellis's History of Zoöphytes, 4to. Decolta's British Conchology, 4to. Lacepedes' History of Oviparous Quadrupeds, 4 vols. 8vo. Thornton's Illustrations of the Sexual System of Linnæus, 4 vols. imp. folio. Michaux's History of the Forest Trees of North America, 3 vols. Shaw's works on Natural History.

Muhlenberg's Botanical Catalogue.

The Rev. Henry Muhlenberg, D. D. of Lancaster, has lately published *Catalogus Plantarum Americæ Septentrionalis huc usque cognitarum Indigenarum et Circurum: or Catalogue of the hitherto known native and naturalized plants of North America, arranged according to the sexual system of Linnæus.* Dr. Muhlenberg's publication may be considered among the most important contributions that have yet been made to the stock of botanical information so far as it concerns the vegetable productions of North America. As a work of labour and research it has rarely been surpassed; and in the important requisite, accuracy, it has no superior. The learned and excellent author has proved that the confidence reposed in his abilities has not been misplaced, and has fully justified the high expectations of his warmest scientific friends. This Catalogue contains eight hundred and sixty-three genera.

It is hoped that Dr. Muhlenberg will soon be enabled to offer to the lovers of botany his long promised work, "*Descriptio Uberior Plantarum Lancastriensium.*"

Massachusetts Historical Society.

THE Historical Society of Massachusetts have added to their first series of collections two other volumes, making the eleventh and twelfth in the whole. The present volumes will in no way diminish the reputation the society has acquired by its former publications; and we take pleasure in stating that they contain many historical details highly interesting to other than the New England States.

Bruce's Mineralogical Journal.

IN the Register for July, 1810, we announced the appearance of the first number of the American Mineralogical Journal, conducted by ARCHIBALD BRUCE, M. D. &c. &c. The first volume of the Mineralogical Journal is now completed; among the papers which it includes, we find communications from Drs. Mitchill, Akerly, Meade, and Arnell; Messrs. Godon, Wistar, Barton, Cutbush, Conrad, Chilton, Smith, and Gilmour; Professors Cooper, Silliman, Griscom, Col. Gibbs, and the editor, Dr. Bruce.

In a department of science where, in this country, so little has been accomplished, and where there remains so much to be done, we cannot but wish for the more frequent appearance of the numbers of the American Mineralogical Journal, and that the distinguished mineralogist who conducts the work would more frequently favour us with contributions from his own rich treasures.

Mease's Archives of Useful Knowledge.

Dr. MEASE, of Philadelphia, we are informed, terminates with the third volume, the publication of his interesting journal, the *Archives of Useful Knowledge*, a work devoted chiefly to agriculture and domestic economy.

Michaux's new Botanical Work.

F. A. MICHAUX, M. D. the enterprising traveller, and son of A. Michaux, M. D. has just completed at Paris a publication on the woods of North America, the materials for which he collected during his second tour through the United States made in the year 1806, 7, and 8. M. MICHAUX has furnished ample details concerning the botanical characters of the trees he has noticed, but has more particularly dwelt upon their importance in commerce and the arts. The work is included in three vols. royal octavo, enriched with numerous plates.

Dorsey's Elements of Surgery.

Professor JOHN SYNG DORSEY, M. D. of Philadelphia, has completed the publication of the *Elements of Surgery* for the use of students, with plates: in two volumes, 8vo. As an elementary work, this performance is calculated to be extensively useful: its value is much enhanced by its embracing the most material improvements in surgery made by the American Desault, Professor PHYSICK.

James's Edition of Burn's Midwifery.

Dr. JAMES, Professor of Midwifery in the University of Pennsylvania has published a new and enlarged edition of Burn's Principles of Midwifery. This edition of Burn is the third that has appeared in this country: the first attempt at improvement upon the original work was made in New-York; the second edition was augmented by, and issued under the superintendence of, Dr. Chapman, now professor of materia medica, and deservedly met with a rapid sale. The chief mass of the valuable notes in Dr. Chapman's edition of the author's production have, by permission, been retained in this of Dr. James. The additions now made to these Principles will

be found to be altogether of a practical nature, and are intended solely to explain or illustrate the text. With great justice it may be added that Dr. James has materially enhanced the value of the original work.

Barton's Memoirs of Rittenhouse.

It was one of the intentions of the editors, which they announced about two years ago, to publish in the Register a Biographical Sketch of the late David Rittenhouse, LL. D. F. R. S.; but they relinquished their design soon after, being informed that a work of some extent, having for its object a full delineation of the character of the American philosopher, and embracing in detail the particulars of his life and education, was in preparation by one particularly qualified for the undertaking.

We have perused the present volume with attention, and we are happy that Rittenhouse has found such a biographer. Rittenhouse, by general consent, is now considered as second to no philosopher of the time in which he flourished: but it is not alone as a self-taught genius of the first order that we contemplate his character: it is not merely for his contributions, great as they have been, to the stock of human knowledge, and much as they have enlarged our horizon, that he commands our admiration: in all the relationships of public and private life, as a member of domestic society, and as the citizen of an enlightened republic, he may serve as an excellent model and example for the instruction of human nature. Mr. B. has not merely presented us with the life of Rittenhouse. "This work is designed (says the author, preface, p. 1.) to comprehend memoirs, not only of Rittenhouse personally, but of several literary, scientific, and other public institutions, as well as of many eminent men, with which his individual history and the annals of his time were in various ways associated: it is presumed that the slight sketches which have been taken in passing along, will neither prove foreign to the nature of the present undertaking, nor uninteresting in themselves. As a citizen of Pennsylvania; as an inestimable public and pri-

vate character, as a distinguished son of science, of great probity and extensive usefulness in society; in all these points of view the History of Dr. Rittenhouse may be contemplated as holding a relationship with almost every object connected with science and the arts, in his day, that could in any wise contribute to the well being of mankind in general, and his native country in particular. Conspicuous and eminently meritorious as he was, yet an insulated account of his talents, his virtues, and his personal services—a bare specification of such qualities and merits as he possessed, abstracted from a due consideration of the state of society and circumstances resulting from it, taken in connexion with them, during the same period—would not be equally intelligible and instructive; and, consequently, must prove less useful. For these reasons, the memorialist has pursued that course which he conceives to be perfectly congenial with the main design of the work, as best calculated to promote its general usefulness, and most suitably adapted to render it interesting, even to those who read for amusement solely."

Mr. Barton, in conformity to this plan, has embodied in the memoirs of Rittenhouse a large amount of interesting matter illustrative of the progress of literature and science, more especially in this country: and in thus doing he has rescued many highly important facts from oblivion, and preserved them for the benefit of future times. Among the papers contained in the appendix to these memoirs is the celebrated Oration of Rittenhouse delivered before the American Philosophical Society, on the 24th Feb. 1775.

Barton's New Biographical Work.

William Barton, Esq. the author of the memoirs of Rittenhouse, contemplates the publication of an original work on *American Biography*, to be comprised in several volumes large 8vo.

Haygarth on Acute Rheumatism.

THE venerable and experienced Dr. HAYGARTH has recently published some interesting observations on the utility of cinchona in the treatment of acute rheumatism. Cinchona was conjectured by Sydenham to be useful in gout. Dr. Haygarth recommends the bark to be given after the manner of Morton, Hulse and Fothergill, from the commencement of the disorder; the primæ viæ having been previously emptied by means of antimonial medicines.

Duncan on Phthisis Pulmonalis.

A volume of uncommon interest on the above disease has lately been presented to the medical world by Dr. Duncan, sen. of Edinburgh. We have not room for any abstract of the contents of the work.

With regard to the digitalis, in favour of which so much has been said by its advocates, Dr. Duncan speaks in language which it would be well for the interests of humanity were it fully impressed upon the minds of those who so liberally use this article of the materia medica. After a series of experiments upon this remedy we were convinced that its value had been overrated, and its properties in many instances wholly misunderstood. And for many years past we have uniformly maintained that its indiscriminate use in pulmonary diseases is the constant source of the most serious evils.* Let those who overlook the different stages of phthisis pulmonalis, and, to the exclusion of other means, still madly prescribe the digitalis, reflect upon the mischief they have occasioned, if nature has not denied to them the powers of cogitation; and, if their senses be not too much obtunded, let them derive wisdom from the perusal of Dr. Duncan's instructive pages.

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* See Delile's Inaugural Dissertation on the Pulmonary Consumption, *New York*, 1807.

Medico-Chirurgical Transactions of London.

In the third volume of the work just mentioned we find that Dr. Bostock of Liverpool, has offered some interesting observations on *Diabetes Insipidus*. This disorder, though but seldom noticed, Dr. Bostock is inclined to believe is of more frequent occurrence than is generally imagined. In the case the particulars of which are here related, Dr. Bostock effected a cure by the use of preparations of iron and the warm bath. Dr. Bostock has lately, and with great success, devoted a large portion of his time to the important subject of animal chemistry; and much of the present paper is taken up in his account of chemical experiments made with the urine of diebetic patients.

Ferriar's Medical Histories and Reflections.

Dr. Ferriar of Manchester has lately published a fourth volume of his medical histories and reflections. Like all the other writings of this distinguished philosopher and physician, this volume is richly deserving of attention. With the exception of some few pages, in which are detailed the particulars of a case of schirrus of the pylorus, it is devoted to the consideration of two diseases, dropsy and diabetes. Dr. Ferriar appears to have been solicitous to find a more certain *hydragogue* than any of those now in use; and from the successful results of his own ample experience he now recommends an extract of the elaterium as surpassing every other medicine in the power of removing serous accumulations, and as affording astonishing relief in the dyspnœa arising from hydrothorax and ascites. Pliny, as stated by Dr. Ferriar, though he was not acquainted with the power of the elaterium in dropsical complaints considered it highly valuable, "ad magnos mortalium usus." Dr. Ferriar has briefly related the particulars of twenty cases in which the elaterium was prescribed with various success. Upon its first exhibition to a patient it is nearly as active and as dangerous, if incautiously given, as arsenic.

"The sensible effects of the elaterium are, severe and constant nausea, frequent watery stools, and in considerable doses, vomiting. It does not uniformly increase the urine, and for this reason it is generally proper to combine it with more certain diuretics. After continuing the use of the medicine for some days, the patient will sometimes bear a considerable increase of the dose. I have gone to the extent of five or six grains a day in this manner, without producing any inconvenience. But it is always proper to begin with the lowest dose, which is the sixteenth part of a grain of the extract."

The Medical Histories and Reflections are in constant demand, and we have long expected their republication in this country: our wishes, we believe, will shortly be gratified.

Alden's Collection of American Epitaphs and Inscriptions.

In the number of the Register for October last, we noticed the intention of the Rev. Mr. Alden, to continue the publication of his collection of American Biography and History, under the above title. Since that time two additional volumes of his work have made their appearance, and the fourth and fifth, which complete the first pentade, are now in the press. The alteration and extension of the original plan of these Collections, which the author promised in a communication to the public, has been fully carried into effect. "My original design," says he, "was merely to gratify an inclination for acquiring a knowledge of important Chronological, Biographical, and Historical facts, nowhere to be found, except on the mouldering mansions of the venerable dead, and on the face of monuments or corner stones, and other parts of public buildings, equally a prey to the tooth of time, or on such materials, and under such circumstances, as to render them difficult of access.

"At length, having amassed many documents, having enjoyed much satisfaction in contemplating these interesting memorials, and having reflected that every vestige of many of these, together with their depositories will soon be swept away by that

current which nothing can withstand; it occurred, that my Collection, if issued from the press, accompanied with occasional notes, would be acceptable to my fellow-citizens, and at the same time, give publicity to a multitude of facts, which ought not to be buried in oblivion, and preserve in a form more durable than marble or brass, a tribute of gratitude and respect to the memory of many, of whom the world was not worthy.

"That disposition, which induced me to copy valuable inscriptions, has often led me to make inquiries of the aged and intelligent, and to extend my researches into ancient records, private manuscripts, and scarce printed tracts and papers, for facts in American Biography and History. The result has been a fund of materials, from which are drawn the *occasional notes*, making the greater part of this Collection. Whether this novel kind of publication will be deemed of importance sufficient to encourage me to undertake another series, should my life be prolonged, time alone can disclose."

It need scarcely be stated the reverend author has faithfully executed the task he undertook, and that this *Collection* embraces a body of scarce and interesting information, highly deserving the attention of all who are desirous of acquiring an extensive and accurate knowledge of American biography and antiquities. As specimens of the contents of the performance we might easily copy many excellent biographical accounts.

Dr. Pearson on the Bronchial Glands.

George Pearson, M. D. F. R. S. has lately read before the Royal Society a paper *on the colouring matter of the black bronchial glands, and of the black spots of the lungs.*

As has been repeatedly observed, the lungs generally become more dark-coloured proportionably to their age. At sixty or seventy years of life they often appear almost uniformly black, from the number and congeries, or coalescence of the maculæ, points, and lines disseminated immediately under the transparent

pulmonary pleura. After a course of elaborate investigation, for the purpose of confirming the pathology of pulmonary consumption, (see the abstract of Dr. Pearson's experiments on expectorated matter in the Register, vol 1.) Dr. Pearson is disposed to conclude that the black matter, obtained from the bronchial glands and from the lungs, to be animal charcoal in the uncombined state: i. e. not existing as a constituent ingredient of animal organized solids or fluids.

"I mean by the term animal charcoal what is popularly understood. Of course I do not mean pure charcoal. Such a state of this substance cannot here be reasonably expected, either from a consideration of the state of it, as inspired from the atmosphere, or from its necessary impregnation with animal matter during its long residence in the lungs. I imagine no person would hesitate to consider such a coaly substance as the present to be charcoal, if derived from other sources besides the animal economy; it being, as shown by the preceding experiments, a black, tasteless, infusible powder, indissoluble in muriatic acid, nitric acid, and perhaps all common acids, except the sulphuric, affording as large a proportion of charcoal acid as animal and vegetable charcoal which has been exsiccated at the same temperature, and equally resisting fire in close vessels.

"For the purposes of physiology, a few theoretical remarks may, perhaps, be useful. I think the charcoal, in the pulmonary organs, is introduced with the air in breathing. In the air, it is suspended in invisibly small particles, derived from the burning of coal, wood, and other inflammable materials in common life. It is admitted that the oxygen of atmospherical air passes through the pulmonary air vesicles, or cells, into the system of blood-vessels; and it is not improbable that through the same channel, various matters contained in the air may be introduced. But it is highly reasonable to suppose that the particles of charcoal should be retained in the minutest ramifications of the air tubes, or even in the air vesicles, under various circumstances, to produce the coloured appearances on the surface, and in the substance of the lungs, as above described. It must also be con-

sidered, that innumerable absorbent lymphatic vessels take their rise in the bronchial tubes; for the lungs are more richly stored with lymphatic vessels than any other organ, excepting the liver. When I compared the black lines and black net-like figures, many of them pentagonal, on the surface of the lungs, with the plates of the lymphatic vessels by Cruickshank, Mascagni, and Fyffe, I found an exact resemblance; and when I found that these vessels contained charcoal, I judged that it was fair to infer, that the lymphatics of the lungs absorb a variety of very different substances, and especially this coaly matter, which they convey to the bronchial glands, and thus render them of a black or dark-blue colour. Hereafter, among other inquiries, the colour of the large trunks of the lymphatic vessels, just *before* they enter the bronchial glands, and just as they pass out of them, ought to be observed. Also the effect of the charcoal thus conveyed into the thoracic duct, or directly into the blood by the lymphatics from the black glands, is, I presume, worthy of attention."

Bancroft on the Yellow Fever.

THE late voluminous performance of Dr. Bancroft, on the yellow fever, has been the means of reviving in England the controversy relative to the specific form and contagious nature of this disease. That learned and distinguished physician Dr. Chisholm has again entered the list of writers in support of the doctrines of contagion; and ably armed as he is, with the weapons derived from his extensive knowledge and experience, we cannot entertain the least doubt as to the issue. We respect Dr. Bancroft for his talents and general erudition, but at the same time cannot withhold the expressions of our disapprobation at his conduct for the gross and illiberal language in which he has thought fit to communicate his sentiments. It would seem to be the opinion of Dr. Bancroft, judging from his conduct, that gross invective and personal abuse may supply the place of well-authenticated fact and legitimate deduction.

The question, is the yellow fever a contagious, and, consequently, imported disease, may be considered as satisfactorily decided in the affirmative. Upon no other rational principle can we account for the non-appearance of this disorder in the United States for several years past, while it has raged with its accustomed violence in the tropical latitudes. The restrictive measures imposed by government on commerce, and our improved system of quarantine regulations have operated as an effectual barrier against the introduction of the pestilence, though the local circumstances of our seaport towns and the temperature of our climate have had their accustomed agency.*

The Port Folio.

Dr. Charles Caldwell, of Philadelphia, has lately become the editor of the Port Folio. The talents and erudition of Dr. Caldwell are well known, and it is confidently hoped that this literary journal will resume the character it originally maintained while conducted by the celebrated *Dennie.*

Officers of the Society for the Promotion of Useful Arts, for 1814.

Simeon De Witt, *President.*
John Tayler, 1*st Vice-President.*
Stephen Van Rensselaer, 2*d Vice-President.*
T. Romeyn Beck, *Recording Secretary.*
Samuel Bard, *Corresponding Sec. Middle District.*
James Low, *do. Eastern Dist.*
Josiah Noyes, *do. Western Dist.*
John W. Francis, *do. Southern Dist.*
Isaac Hutton, *Treasurer.*
Garrit W. Van Schaick, *Senior Counsellor.*

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* See the several quarterly reports on the weather and diseases of New-York.

Counsellors.

Isaac Hutton,	Horatio G. Spafford,
Timothy Clowes,	Edmond C. Genet,
John M. Bradford,	Jacob Green,
Philip S. Van Rensselaer,	John Woodworth.

Observations on the Weather of the City of New-York, for the months of January, February, and March, 1814.

JANUARY.

With the exception of a few days, the thermometrical heat for January was generally at or about 32 degrees of Fah. The coldest day was on the 4th, when the mercury stood at 7 A. M. at 17; at 3 P. M. at 24; and at 7 P. M. at 22. The greatest degree of temperature was on the 17th, and on the 29th. On the former day, the thermometer stood at 7 A. M. at 33; at 3 P. M. at 39; and at 7 P. M. at 36; on the latter day, at 7 A. M. at 36; at 3 P. M. at 39; at 7 P. M. at 38 degrees. Snow fell in considerable quantities on the 9th, 10th, 16th, and 18th. Rain fell on the 24th. The other days of the month were generally clear: wind part of the time northerly.

FEBRUARY.

The weather of this month, both with regard to temperature and the humidity of the atmosphere, was somewhat greater than we are accustomed to experience at this season of the year. The thermometrical heat was repeatedly more than 40 degrees during the whole day. The coldest day was on the 4th, when the mercury stood, at 7 A. M. as low as at 17; at 3 P. M. at 25; at 7 P. M. at 23 degrees.* On

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* At Albany the thermometer, on the 1st of February, was at 7 A. M. two degrees below 0; and on the 4th, at 7 A. M. at 2; at 3 P. M. at 0: and at 7 P. M. at 6. See the Stranger for February 12, 1814, published at Albany.

the 8th, the thermometer stood at 7 A. M. at 36; at 3 P. M. at 45; at 7 P. M. at 38. On the 17th, at 7 A. M. at 40; at 3 P. M. at 45; at 7 P. M. at 44. The remaining days of February were about the temperature last mentioned; sometimes higher. Snow fell on the 2d, 6th, and 14th; rain on the 7th, 9th, 10th, 11th, 17th, 24th, and 25th. Overcast on the 1st, 2d, 3d, 7th, 9th, 13th, 16th, 20th, 22d, and 27th. Wind N. or N. E.

MARCH.

Much more of the severity of winter was experienced in March, than during the preceding month. From the 1st to the 10th, though the weather was clear, the degree of heat indicated by the thermometer was for the most part considerably below the freezing point. From the 10th to the 26th, inclusive, there were many and heavy falls of rain, accompanied with a strong wind from the N. E. On the night of the 26th, considerable rain fell, accompanied with heavy thunder and lightning. The lowest degree of temperature was on the 1st, when the mercury stood at 7 A. M. at 21; at 3 P. M. at 26; and at 7 P. M. at 25. The highest degree of warmth was on the 27th, when the thermometer stood at 7 A. M. at 47; at 3 P. M. at 63; and at 7 P. M. at 56. Snow fell on the 10th, 21st, 23d, and 24th. Wind for the most part northerly.

Quarterly Report of the Diseases of the City of New-York, for the months of January, February, and March, 1814.

In our quarterly report for January, February, and March, we have uniformly noticed the more or less general prevalence of disorders of an inflammatory type, the effect of the weather at this season of the year: diseases of the thoracic viscera and more especially pulmonary consumption have been

attended with their usual mortality; and as observed on a former occasion in a great number of instances "the ordinary inflammatory diseases of the season have exhibited an unusual degree of malignancy." In many cases the inflammatory stage was of comparitively short duration, and has been followed by symptoms strikingly characteristic of the typhoid type. Indeed, typhus fever has appeared with more than ordinary frequency, and, as far as we can learn, has been attended with great mortality. The writer has therefore thought it not improper to devote the present report principally to the consideration of this form of febrile disease.

From the time of Hippocrates to the present day the subject of fever, more than any other disease to which the human frame is liable, has received the attention of physicians. Yet, looking into our obituaries, we find that fever and febrile diseases still constitute the great outlets to human life, and are at this day almost as fatal as they were in the time of Sydenham, who calculated that fevers, properly so called, make up nearly two thirds of the diseases which prove fatal to mankind, and that eight out of nine of all who die are cut off by febrile complaints. However minutely, therefore, we may be acquainted with the symptoms of fever in its various forms and stages; however extensive may be our knowledge of its predisposing and exciting causes, we certainly are very deficient in our acquaintance with the *proximate* cause of fever, or its treatment would be more distinctly defined in its various stages than it appears to be in any of the great practical works that have fallen under our notice. Whence, then, has arisen the variant, and, we may almost say, the *empirical* practice, that fills the pages of the best writers on fevers, and that are even to be found in the truly valuable works of Boerhaave, Cullen, Wilson, Fordyce, and others? We answer; it is in a great degree ascribable to the local views to which

some of those writers have been limited by their own hypotheses, and by which others have become subsequently enslaved.

Boerhaave's exclusive attention to the *humoral pathology* gave him necessarily but a limited and partial view of the nature of fever, and its operations upon the various parts of the animal economy; he, consequently, neglected all those indications in the treatment, that a more extensive view of the *nervous system*, as taken by Hoffman and Cullen, would have pointed out. But his successor Cullen, on the other hand, by avoiding Scylla ran on Charybdis. The nervous system, according to his view, had been too much neglected; but in restoring it to its merited notice, he again, in a great degree, lost sight of all the other parts of the human frame, pronouncing the *humoral pathology* in particular a creation of the imagination, and in its application to practice altogether hypothetical.*

The still more recent writings of Brown, Beddoes, Darwin, Girtanner, Clutterbuck, Rush, and others, have been too successful in spreading these partial views of the human structure, and, consequently, limited pathology of the diseases to which it is liable. Even the learned and elaborate work of Wilson is calculated to diffuse the same erroneous doctrines; nor is the more independent and philosophical Fordyce altogether exempt from this charge, although he professes to be totally guided by facts, regardless of hypotheses. Fever, in the opinion of the writer of these remarks, is a disease of the whole system; it appears no less in all the faculties of the mind than in all the functions of the body; it shows itself in every organ of our frame, and affects every nerve and fibre of our system; the absorbing, the circulating, and excreting

* See preface to his First Lines.

systems of vessels, are all affected by it; it shows itself in all the various fluids of the body as well as in the solids; in a word, it is omnipresent; it has no one pathognomonic symptom, but is constituted by a concourse of symptoms, and these variously combined in the various forms that fever assumes, depending upon the causes from whence it proceeds, and the condition of body in which it occurs. If this view of the subject be correct, it will necessarily lead the physician to more extensive principles of practice; it will lead him, at the bedside of the patient, to pay due regard to the nervous system, and the phenomena it exhibits, and the indications thence arising; but at the same time it will lead him to notice the changes which may be induced in the secretions and excretions, and the circulating mass from whence they proceed. We offer these remarks for the purpose of calling the attention of the reader to the too long neglected pathology of the fluids;* at the same time that we invite the attention of the practitioner to some points of practice, not in our opinion sufficiently attended to in the treatment of fevers, and which the successful treatment of some recent cases of typhus fever have enabled us still further to confirm. It is proper here to remark, that, when speaking of fevers, we have in view the continued type of fevers properly so called, not referring to the phlegmasiæ or other pyrexious diseases; yet, in many instances, the principles we wish to inculcate, and the practical deductions thence arising, will be no less applicable in the *typhoid* state of many of the phlegmasiæ, and other febrile diseases, than they are to the advanced stage of typhus fever itself.

It will be acknowledged, that fever cannot long continue without inducing debility in the heart and arteries, in common

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* See Dyckman, on the Pathology of the Fluids, and the review of the same Dissertation in the present number of the Register.

with all the other parts of the system, and that the sensibility to impressions must be proportionally increased. They are, consequently, predisposed to be more readily acted upon even by the natural stimuli of the system; the heart and vessels are accordingly excited to preternatural frequency, even operated upon by the blood and other fluids of the system in their natural and healthy condition, as we see daily illustrated in the progress of all fevers, and in convalescence from fever: We contend that fever, long continued, not only wastes the power of the solids, rendering them more irritable, but by the derangement in the functions and excretions, perhaps by the action of the blood vessels themselves upon their contents, and especially by the retention of those materials which should have been thrown out of the system as noxious, which in health are constantly ejected, the circulating fluids become changed and vitiated, and thereby become additional sources of irritation to the heart and arteries, whose susceptibility of impression, as we have just observed, is also morbidly increased. From this view of the more irritable state of the circulating system, and the vitiated condition of the fluids, we infer, that unless by some salutary power inherent in the system itself, or by some means suggested by art, the greater irritability of the whole system, and of the heart and arteries in particular, be diminished, or the morbid changes induced in the fluids they circulate be counteracted, these causes of fever, mutually operating upon each other, must increase, and fever be continued until the vital principle itself be totally expended. How far, then, we ask, is the attention of physicians directed to these two cardinal objects, in the treatment of the advanced stage of fevers? How far is their practice calculated either to impart vigour to the system, and thereby to lessen the morbid sensibility of the nervous and moving fibre, or to counteract the septic tendency of the circulating fluids which obtains in most fevers of the continued type?

Are we not hereby led to condemn that indiscriminate and long continued use of the *debilitating evacuants*, usually prescribed at this advanced period of fevers and febrile diseases, in as far as they are calculated to add to that waste of excitement, and that very vitiation, to which we have referred? Is not the abstinence, too, usually enjoined by physicians in the typhoid stage of the fever, for the same reasons, no less to be reprobated? Are we not led, upon the same principle, to condemn the prescription of *camphor*, *musk*, *opium*, *digitalis*, and other powerful sedatives, so frequently directed in this stage of fever? We refer to the ordinary mode and quantity in which these narcotics are administered in fevers by the greater part of practitioners; and who, forsooth, by a strange misnomer, denominate them *stimulants!**

The indiscriminate practice of *purging*, as advised in typhus fevers by Dr. Hamilton,† of Edinburgh, is, in our opinion, no less dangerous, by the debility it induces, and is not prescribed with sufficient caution by that distinguished practitioner, for whose opinions and practice, on most occasions, we entertain, and beg leave to express, our highest respect. Even the long continued exhibition of the various preparations of mercury and antimony, is, in the opinion of the writer, a no less dangerous and fatal practice in this advanced stage of fever. On the contrary, if the views we have taken be correct, after the indications which arise in the first stage of continued fevers have been fulfilled, in the means of accomplishing which most physicians are agreed; after the necessary evacuations by the lancet and other depleting means have been made, which are frequently called

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* For the evidence of the sedative effects of opium, see Dr. Bard's Inaugural Dissertation, Edinburgh, 1765, also Dr. Monro's Experiments on Opium.

† See his valuable work on the use of Purgatives.

for, both in the invasion and in the progress of fever; after the stomach and bowels have been cleansed, and due regard has been paid to the no less important function performed by the skin, our attention should next be given to the two following objects, and which the practitioner should never lose sight of when the typhoid state of fever has actually arrived: 1st. To preserve the natural powers of the system, and carefully to guard against every further waste of excitement; 2d. By suitable antiseptic nourishment, and other means, including external as well as internal applications, to preserve the circulating fluids from those morbid changes to which they constantly and rapidly tend in all fevers of the continued type, especially in those arising from *contagion*, which, in a peculiar manner, depresses and exhausts the vital powers. In this advanced or typhoid state of fever, characterized by a disturbed state of the brain and nervous system, showing itself in delirium, watchfulness, or irregular and interrupted sleep, frequent sighing and subsultus tendinum; attended with an increased but feeble circulation, hurried and irregular respiration, with its usual consequences, an increased heat of the body and dryness of the surface; characterized, also, by a deranged state of the secretions and excretions, exhibiting themselves in an offensive breath, turbid urine, frothy and offensive discharges from the bowels, a foul sordes about the teeth and gums, discoloured lips, and a brown or a black appearance of the tongue; and, perhaps, added to these, a cadaverous and offensive smell of the whole body; in this condition of the system the means of fulfilling the indications before mentioned, are, 1st, To supply the patient with the most powerful stimuli both diffusible and permanent;

viz. the volatile alkali, æther, wine,* wine whey, porter, yest, bark,† Virginia snake-root, bitters, and the mineral acids, preferring each or either of these according to the peculiar circumstances of the case. We are aware that this practice is reprobated by many physicians as improper in this state of excitement, whatever may be the stage of the disease, or the circumstances that may have induced it. This leads us to observe that many physicians are not sufficiently attentive to discriminate between the *simple excitement* of the early stages of fever, which is characterized by the symptoms of inflammatory action, and is kept up by considerable vigour of the system; and the *complicated excitement*, which appears when the powers of life are greatly exhausted, and the disease has been long protracted. A corresponding want of discrimination appears in their practice; they, therefore, condemn in the *last* stage those means of excitement which are injurious in the *first;* and they approve in the last the continuance of the same depleting and debilitating means that have been found useful in the first: what! say they, administer *wine*, *bitters*, or *bark* in this quickened circulation, attended with a hot and dry skin? We answer, that in such typhoid state of body, in this exhausted state of the vital powers, the remedies that have been enumerated are among the most effectual means of reducing that very heat of skin, and of diminishing that increased excitement of the whole system, which, as we have before remarked, are frequently both ascribable to the morbid sensibility of the heart and vessels to their vitiated con-

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* The reader will find some pertinent practical remarks on the quantity of wine which may be safely and advantageously administered in this stage and character of fever, in Moore's Med. Sketches, p. 13, 517, &c.

† See Moore's Med. Sketches, p. 509.

tents; and that this sensibility being counteracted, the circulation is necessarily reduced in frequency, the respiration becomes less hurried, and the heat of the system, which is ever in proportion to the circulation and rapidity of respiration, is, consequently, diminished.

But, 2dly. We should be no less attentive to the state of the fluids than we are to counteract the morbid excitement of the solids; with this view, attention should be daily given to the bowels for the purpose of evacuating their offensive contents, especially of the lower tract of the intestinal canal; for these malcontents being retained, not only in some instances become the sources of irritation to the intestines themselves, producing diarrhoea, but by their absorption into the mass of circulating fluids, which are thereby rendered still more malignant, they necessarily constitute fresh sources of febrile excitement. Evacuations from the bowels, however, are not to be obtained at that expense of the powers of the whole system, which the means recommended by Dr. Hamilton are calculated to produce; on the contrary, at this advanced period of fever, we should just as readily think of putting a lancet into the patient's arm as emptying his bowels by the active purges he has directed: these, too, we suppose to have been already administered in the first stages of the disease. Enemata, or, at most, the occasional use of small doses of rhubarb and magnesia, or some other mild cathartic are only, in our opinion, admissible at this period of the disease. For the united purposes of preserving the surface in a perspirable state, of diminishing its temperature when excessive, and of removing the offensive materials which are excreted by the skin, and constantly accumulated upon it, the body should be regularly cleansed once or twice in the day, by ablutions of vinegar and water, which should be applied either tepid or

cold, according to the temperature of the body;* and should the skin remain dry, after such ablutions have been made, fomentations of vinegar and water applied to the extremities, and steadily persisted in, are among the most effectual means of relaxing the surface, at the same time that they are calculated to allay much of that distressing restlessness which attends this stage of the disease. Upon the same principle of correcting the state of the fluids, the nourishments directed should be exclusively of the *vegetable* kind, as best calculated to resist that putrescent tendency which manifests itself in this state of body; for this purpose, *arrow root, sago, tapioca, indian* or *oatmeal gruel*, rendered palatable by the plentiful addition of wine, and some of the most grateful aromatics, should be hourly administered in this exhausted state of the system. The bedding and the dress of the patient, especially if he wear flannel next the skin, which is the preferable clothing in this form of fever, should also be frequently renewed. For the purpose of controlling that restlessness which usually appears in the evening exacerbation, and of procuring sleep, *an occasional anodyne* may, in many instances, be administered with the most beneficial effects; but the indiscriminate use of opium or laudanum throughout the day, and through the whole progress of the fever, with the view to their supposed stimulant effects, cannot be too severely reprobated; nor have we ever witnessed the stimulant effects ascribed to the fashionable *camphorated julep*, and other preparations of that medicine so often had recourse to; but we can indeed say, that we have, in very many instances, witnessed its debilitating, and, as we believe, its fatal effects, in the typhoid state of fever. Such is the practice the author of these remarks has

* See Currie and Jackson on cold bathing in fevers.

pursued, for many years past, in the typhus fever of this city, the typhoid stage of scarlatina, peripneumonia typhodes, and in other febrile diseases; and he can bear the most unequivocal testimony in favour of its safety and success.

RECENT AMERICAN PUBLICATIONS.

An Inaugural Dissertation on the Proximate cause of Death from suspended Respiration, in Drowning and Hanging, with the means of resuscitation. Submitted to the examination of the College of Physicians and Surgeons of the University of the State of New York, on the 3d of May, 1814. By Ansell W. Ives. New-York. 8vo.

Experiments on the Principles of Life, &c. &c. By M. Le Gallors, M. D. P. Translated from the French, by N. C. and J. G. Nancrede, M. D. Philadelphia. 8vo.

TO CORRESPONDENTS.

The editors were in expectation of inserting in the Register a Biographical Account of the late Dr. Richard Bayley, formerly Professor of Surgery in Columbia College, and author of a Treatise on the Yellow Fever which prevailed in New-York, in 1795, and of other Tracts. The only reason they can assign, singular as it may seem, for not having preserved some memorial of this nature in behalf of the memory of this distinguished teacher and practitioner of Surgery is, that they have in vain endeavoured to procure the requisite materials.

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FOURTH VOLUME.

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FINIS.

ERRATA.

Vol. III. Page 230, line 28, for *rural* read *civil*.

Vol. IV. Page 422, last line from the bottom, for *abence* read *absence*.

434, line 27, for *topic* read *tropic*.

575, line 4, for *sneers of fastidious and factitious impertinence* read *sneers of impertinence*.

584, line 6, for *space* read *share*.

605, line 7 from the bottom, for *institution* read *instruction*.